

2. Ryūkyū Survey 1960

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The Wenner-Gren Foundation for Anthropological Research, New York, gave us a generous research grant which made possible this archæological and ethnological survey of southern Ryūkyū in May and June 1960. We take this opportunity of expressing to the Foundation our sincere thanks.

Our first destination was Yonaguni 與那國 the southwestern-most island of the Yaeyama 八重山群島 archipelago. We spent a disproportionately long time of three weeks there, because so far no full-scale scientific survey had been carried out on that island. Field work of shorter duration was done on the Ishigaki 石垣, Iriomote

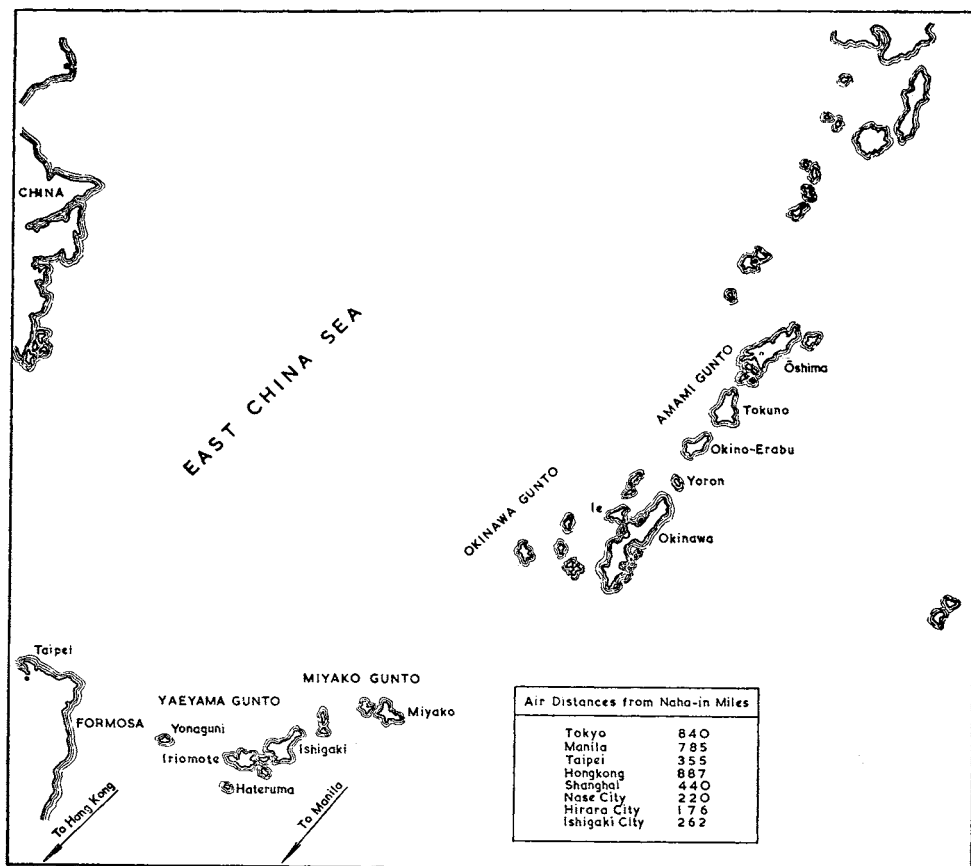


FIG. 1a. Ryūkyū 琉球 Islands.

西表 and Taketomi 竹富 islands. On our return to the main island of Okinawa 沖縄, the Shuri 首里 Government Museum gave us permission to study its prehistoric materials. Finally, we inspected the Uji cave site, near Chinnen 知念 village in southern Okinawa, and made a trial excavation on Yabuchi 筥地, an islet off Katsuren peninsula, central Okinawa. This is a preliminary report of our field work.

I. YONAGUNI 與那國 ISLAND

1. Topographical features and nature of settlements

Yonaguni lies at the southwestern extremity of the Ryūkyū island chain, at latitude $24^{\circ} 28' N.$ and longitude $122^{\circ} 55' E.$ (Fig. 1a). It is 43 nautical miles from the west coast of Iriomote; Formosa lies 40 nautical miles due west.

Its circumference measures 27.491 km., and its total area 30.909 sq.km. During our three weeks we covered the whole accessible territory of Yonaguni by foot or on horseback.

Its eastern extension is called Anaisate (East Cape) and its western extremity Irisate (West Cape); both capes are cliffs over 100 metres high (Fig. 1b). On Sonai 租納 Bay between East Cape and N'mabana is the biggest settlement of the island; it developed on the sandy beach of the bay. On Kubura 久部良 Bay which occupies almost the whole area between N'mabana and West Cape is another settlement. A third settlement has grown up on the coast of Hinai 比川 Bay which lies, in the area called Tarumai, between West Cape and Aragabana. Coral reefs surround all three bays and prevent access to the island during part of the year.

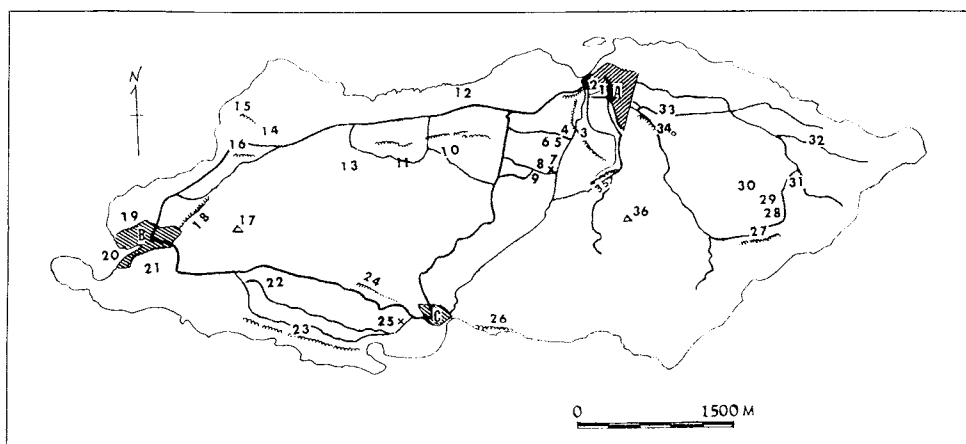


FIG. 1b. Yonaguni Island.

A. Sonai Town. B. Kubura Village. C. Hinai Village.

1. Trial trench, Kaneku; 2. Reputed sand burial area; 3. Tsah nu kan nu daya (cliff burials); 4. Nukunuku; 5. Sanai; 6. Uya-baru; 7. Nakamadone trial trench; 8. Bushiki; 9. Nauni; 10. Mutabaruhainukichi; 11. Mutabaruhainukichi; 12. Tuguru; 13. Dana; 14. Sanbaru; 15. Sanbaru kami daya; 16. Dannu; 17. Kubura dake; 18. Bunabidaya; 19. Kuburabaru; 20. Kubura harbour; 21. Tōbaru; 22. Adze reportedly found here; 23. Tarumai; 24. Utanuta; 25. Hinai, Uizato trial trench; 26. Cliff burial area; 27. Haimutu; 28. N'danguya; 29. Many *panari* sherds found; 30. N'danguya festival area; 31. Midududama; 32. Dateg; 33. Uranudai; 34. Tsuingata cliff burial site; 35. Kanumata; 36. Urabudake.

Yonaguni is hilly and its vegetation abundant. The highest elevation is Urabudake 宇民部岳, 231 m. above sea level. At its foot is the confluence of the mountain rivulets with the Tabaru river which bypasses Sonai town and empties into Sonai Bay. Its outlet is greatly obstructed by sand dunes, the drainage area is characterized by a broad belt of paddy fields (Pl. IIa). The south slope of Urabudake extends fan-like and terminates in a densely overgrown area which reaches as far as the coast. To the east of Urabudake lies the district of N'dantabaru, fringed by the Dateg Hills, at their eastern extension is Cape Anaisate (Pl. I).

According to local tradition, a village called Dunanbara was formerly at N'dantabaru, whereas a village of the same name (Dateg) existed at the foot of the Dateg Hills. Further abandoned village sites are reported from the east of the present village of Kubura, in the district Tebaru and on the plateau north of Kubura-dake (Tôbaru). Tradition also reports that a village existed between the eastern slope of Kuburadake and the western slope of Urabudake. All these former village sites are invariably marked by near-by cliff burials.

2. History

Yonaguni history is shrouded in complete mystery. Neither local traditions, nor outside sources provide reliable data for a reconstruction. Official written sources like the court gazette of the 'Shuri ôfu' 百里王府 (A.D. 1707) offer no detailed information on the outlying Yaeyama islands, let alone isolated Yonaguni. The *Yaeyama tō yurai ki* 八重山島曲來記 and other locally compiled documents are of uncertain date and mutually contradictory. As pointed out in an appendix, the *Yaeyama tō yurai ki*, originally in 7 volumes, was lost in the tidal wave of A.D. 1771; and it was subsequently reconstructed by order of the officials Miyara, Ishigaki and Ohama.

Sanai-Isoba. In local tradition the key figure is the female chieftain Sanai-Isoba. Ikema and Arazato (1957: 46) explain the name as a combination of the given female name *Isoba* with the place-name *Sanai* which, in turn, denotes 'place of the gajumaru' (*figus retusa*, small-leafed banyan).

Sanai-Isoba is a female of superhuman stature and strength; she performed astonishing feats and taught the islanders agriculture and improved ways of life. She also established her four brothers as village heads of Donanbaru, Dateg, Dannu, and Tebaru. She is said to have gone abroad to Ishigaki and Iriomote, thereby initiating a cultural pattern, whereby the less advanced must learn from their superiors, viz. the Okinawans from the Chinese, the Miyakoans from the Okinawans and so forth; isolated, marginal Yonaguni was the lowest rung on the ladder.

Is Sanai-Isoba a historical person and if so when did she live? Every Yonaguni child can point out the field 'where her house once stood' and knows the location of her grave where, under a large tree, village trials were held until quite recently. Sanai-Isoba is worshipped in a ritual which takes place once a year. The high-ranking Chimafuka family consider her their ancestor and until a generation ago reckoned from her its matrilineal descent.

But the historicity of the heroine is in question. She is credited in local tradition with the repulse of the first invasion of the island in A.D. 1500 by Nakaya Kanemaru

仲屋金盛. With this clue in hand, let us go briefly to the recorded history of the Ryūkyūs.

The 15th and 16th centuries witnessed the peak of Ryūkyūan expansion and prosperity. The Lord of Chūzan 中山 had overpowered his rivals in north (Hokuzan 北山) and south (Nanzan 南山) and firmly established his reign over the whole island of Okinawa; the outlying islands entered into tributary relations with him, Yaeyama as early as A.D. 1390.

Formal recognition by the Chinese throne was won in A.D. 1372 and with it the privilege to send missions and to pay tribute to China at fixed intervals. The port of entry assigned to the official and trade missions from Okinawa was Ch'uang-chou 泉州 in Fukien. By A.D. 1439 this port had already a permanent Okinawan settlement and the sons of the Okinawan nobility went to China to be instructed and to spread the knowledge of Chinese culture on their return. Chinese emissaries called at the Okinawan court in Shuri, where special quarters were erected for them. The court in Peking granted Shuri the exceptional favour of sending Chinese immigrant colonizers—the famous '36 Fukienese families' of the old records, the number 36 being merely a figure of speech (A.D. 1393).

Relations with China were not the only, although the most important and most profitable ones, which the court of Chūzan entertained. In time it had succeeded in monopolizing the entire trade between Japan, Korea, China and Southeast Asia and beyond. Luxury goods from the south, picked up at different Southeast Asian ports (whose importance changed with the changing political situation), were transported to the warehouses of Naha and thence transshipped to China, Korea and Japan. Likewise the products of those northern countries were disposed of in the ports of the south. We know of more than 44 official embassies dispatched between A.D. 1432 and 1570 to Annam, Siam, Patani, Malacca and Java (Akiyama 1930). Formal relations with Java were established in A.D. 1430. Sumatra, Borneo, Luzon and Formosa seem to have been less frequented, at least at official level. In A.D. 1511 the Okinawans encountered the Portuguese at Malacca, an event duly recorded by both sides. The Okinawans handled, according to the Portuguese, cargoes of gold and copper, lacquerware, fans, paper, silk, damask, porcelain, onions and other vegetables. Most of these goods were of Chinese, Japanese and Korean provenience.

To return to events nearer home. The Lord of Yaeyama, Oyake Akahachi 赤蜂, refused to pay tribute to Chūzan and got involved in feuds with the Lord of Miyako in the closing years of the 15th century. King Shō (Hsiang) Shin 尚忠 of Chūzan organized a punitive expedition against him and put the Lord of Miyako, Nakazone Toyomioya 仲宗根豊見親 in charge of the force. The subjugation of Oyake Akahachi took place in A.D. 1500. Nakazone's heir, Nakaya Kanemaru, made a simultaneous attack on Yonaguni, to conquer it too. It was this attack which Sanai-Isoba is said to have repulsed. The account in local tradition is told with extravagant details, befitting the station of a heroine like Sanai-Isoba, but is hardly conducive to credulity (Ikema and Arazato 1957: 54/55).

Sanai-Isoba does not appear in any of the old documents of the surrounding islands. An entry in the genealogy of the Tadamichi family of Miyako says that a war-ship was sent to subdue Yonaguni, but failed to do so in A.D. 1500 when Yaeyama

was conquered. Ikema and Arazato (1957: 57) see in this an indication that Sanai-Isoba lived round A.D. 1500. But the entry only confirms that an abortive invasion took place, without mention of a Sanai-Isoba beating it off.

It is probable that Yonaguni tradition has woven into a single story the memory of its culture heroine and historical events which are the high light of south Ryūkyū history, and thus lays claim to a place in the historical and cultural context of this island group. The exaggerated and incredible features of the alleged encounter between Sanai-Isoba and Nakaya Kanemaru reflect, by the way, the sad realization that recognition as equals was not to be theirs.

The Koreans' Report. The only one independent source of information on the Yaeyama islands is found in the Korean chronicle *Authentic Record of the great King Seung Chong* 成宗 (Seoul 1499). Several inhabitants of the Korean island Che-ju-dō, 濟州島 (제수도) in the 15th year Cheng-hua of Ming (1479), were swept away with their boat as far as Yonaguni and only returned home, over one and a half years later, by way of Iriomote 西表, Hateruma 波照間, Aragusuku 新土城, Kuroshima 黒島, Tarama 多良間, Irabu 伊良部, Miyako 宮古 and Okinawa, under an agreement which existed between Korea and Chūzan for the repatriation of shipwrecks.

On their return, their adventures were written down by a court chronicler. This report not only faithfully records manners and customs, but also enumerates with great accuracy plants and animals they saw. We shall, in the course of our own report, make repeated reference to this document, which proved invaluable in our appraisal and understanding of some contemporary things observed on this island.

In the Korean report there is no mention of Sanai-Isoba. This is not necessarily a *terminus post quem* as the Koreans were not conversant with the local idiom. It leaves the question of Sanai-Isoba still open to debate.

Our position is slightly better on the relations between Yonaguni and Iriomote. Identical traditions, describing frequent, peaceful intercourse are told in both islands: 'A youth of the Matsubara house left his home every night for an unknown destination. His elder sister fastened a thread to his clothes and thereby discovered that his nightly excursions led him to Iriomote'. An identical story is told in Iriomote about the famous Irimotean hero Sonaidō.

The place name Sonai however occurs on both islands, and Sonaidō is a native of Sonai on Iriomote. He figures in another interesting Irimotean tradition recorded in the *Yaeyama tō yurai ki*:

'The origin of Ohatake: In ancient times a man called Sonaidō lived in Iriomote village. His height exceeded 6 shaku (180 cm.) and his strength was superhuman. He built a house at a place called *ohaketa* (sic!). One fine day he climbed up a hill and looked out in all directions, when he noticed the faint outline of an island to the west. He got a warship ready, assembled several score of brave men and with a favourable wind set sail for Yonaguni. He won in battle, took several of the island's headmen prisoner and made them surrender. Later these events were duly reported to the Throne and the prisoners handed over. Accordingly, all Yonaguni ships plying between this island (Ishigaki) and Yonaguni make it a rule to this very day to stop at Iriomote and worship the fire deity at Ohatake.'

Yonaguni can indeed be seen from Sonai, Iriomote. The tradition seems to find confirmation in the genealogy of the Keraikedagusuku family of Iriomote (probably compiled round A.D. 1745) where the second and seventh Keraikedagusuku are described as 'Master of Yonaguni'. In the case of the seventh Keraikedagusuku it is fairly certain that he was appointed to the governorship of Yonaguni by the central government. The Keraikedagusuku with the given name 'Sonaidō', the possible hero of the above tradition, is of the third generation and his official title reads only 'Lord of Iriomote'.

In a variant of the above tradition (Kishaba 1954: 44), the Iriomotean—this time characteristically referred to as 'Sonaidō *Otakegisha*' (not Keraikedagusuku)—is credited with weaning the Yonagunians from the repulsive custom of cannibalism. Such was the reputation these isolated islanders enjoyed amongst their neighbours, which has, incidentally, only changed in nuance in our days of improved communications!

It seems somewhat futile to try to identify the legendary Sonaidō with one of the recorded Keraikedagusuku. Like Yonaguni's Sanai-Isoba he may be several historical and legendary figures rolled into one.

As no trace of the alleged battle and submission are found in Yonaguni tradition, one suspects that they may be a diplomatic invention to draw the Central Government's attention to a legitimate claim on this island, stemming from peaceful settlement and colonization.

To this very day some inhabitants of Anaihamate, a ward of Sonai-town, Yonaguni, remember and take great pride in their Iriomotean ancestry. They are amongst the most respected families of the island and live, at present, in close concentration in Anaihamate. According to Ikema and Arazato (1957: 66) they are the following families:

- Sonai family descended from Sonai family (Sonai village, Iriomote)
- Matsubara family descended from Nusuku family (Sonai village, Iriomote)
- Oya family descended from Ubo family (Hitate village, Iriomote)
- Ubutagia family descended from Otake family (Sonai village, Iriomote)
- Maematsuda family descended from Keraikedagusuku (Sonai village, Iriomote)

The passage at the end of the Sonaidō tradition, which says that all Yonagunian ships call at Iriomote to worship at Ohatake, in our opinion, clearly points to worship at the place of ancestral origin.

To sum up, from the above evidence a partial and most likely repeated settlement and colonization of Yonaguni was made from Iriomote, probably over a considerable period of time. This seems clear enough though concrete details elude us.

The years following the attack by Nakaya Kanemaru saw in Yonaguni the rise to power of one Untura. Untura was originally a native of Karimata, Miyako, who when ten years old, in a year of famine, had been sold to Yonaguni for a 4·8 gallon measure of millet.

Twenty-two years after their first abortive expedition to Yonaguni, Nakazone Toyomioya and Nakaya Kanemaru once more embarked and succeeded this time

in conquering the island; they killed the usurper Untura at Anaihamate and carried off his daughter captive.

In A.D. 1522, Nakazone Toyomioya swore allegiance to the Court of Chūzan in the name of his own island (Miyako) and the islands Yaeyama and Yonaguni which he had added to the realm.

The island came now under direct control of the Central Government which sent officials. The heterogeneous culture which had characterized the main island of Okinawa for a long time, began to penetrate these marginal islands, considerably diluted and with a time lag of over 200 years.

The three settlements of Sonai, Kubura and Hinai. The present-day settlements prove to be, with the exception of Kubura, products of frequent removals of village sites and subsequent concentration into two settlements. All their removals are faithfully recorded in local tradition and found confirmation in course of our survey. The frequent moves were caused apparently by natural catastrophes, water shortages and raids by pirates. Here is a brief history of the three settlements:

A village was in former days situated on Kuburafurishi plateau, near present-day Kubura primary school. It moved from this locality to found the village of Tebaru, according to tradition ruled over by one of Sanai-Isoba's brothers. The village was moved again, reputedly after being sacked by Nakaya Kanemaru. However, a shrine is still left at this old village site and a yearly rite is held there during the 11th month of the lunar calendar. On this occasion prayers are offered for Yonaguni to be spared the visits of pirates and shipwrecks. This ceremony makes one wonder whether Tebaru was sacked by pirates rather than by Nakaya Kanemaru, a question which is important for the dating of the site. The people of Tebaru moved to a place southwest of present-day Hinai and founded a new village which they called Uizato. One more move brought the settlement to its present site Hinai (Census of May 1959, 383 inhabitants).

The history of the second settlement, Kubura, is very short. It was founded after the First World War by fishermen from all over the Ryūkyūs as a convenient fishing base. Some 50 different lines of descent are counted in this village (Census of May 1959, 1404 inhabitants).

The history of the administrative centre Sonai town (Census of May 1959, 3046 inhabitants) is most complicated (Pl. II*a*) The inhabitants of the former villages Tōbaru and Dannu, reputedly ruled over by Sanai-Isoba's brothers, decided to join Sanai village, from where Isoba governed all other settlements. The new village was called *Shimanaka*. Apparently such a concentration of population proved unworkable, as suggested by the subsequent founding of the branch villages Bushiki and Nauni. Both these villages moved after a while to new locations and founded settlements by the names of Togul and Nukunuku. After the First World War, they joined Sonai town where they form the Shimanaka Ward.

The second component making up present-day Sonai is represented by the former villages Dateg and Donanbaru, also reportedly under the domain of the Isoba brothers. These villages were sacked by Nakaya Kanemaru and never rebuilt. Their inhabitants founded a new village, Uranudai, which finally joined Sonai town.

A third component is Anaihamate, already mentioned.

Today it is quite impossible to identify the possible origin of the Sanai dependencies outside Yonaguni, or to assess their relation with Iriomote. But one may safely say that intercourse of Yonaguni with Iriomote and Miyako (sale of Untura), as well as of Yonaguni and Yaeyama (Ishigaki) took place before the first attempted invasion of Yonaguni, which is the first outside link with local history (A.D. 1500). Fukienese origins dating to before the conquest have been proved for at least one prominent island lineage (Anishika). The Korean chronicle of A.D. 1499 infers also intercourse with Hateruma. Further relations with the outside world cannot be established from either recorded or traditional history at this stage of our knowledge, although an analysis of Yonaguni culture shows that they must have existed.

Our attempt to reconstruct the history of local settlement, partly deduced from written documents, partly from local oral information, served us in our survey, which in turn, tended to confirm our historical reconstruction.

3. *Archæology*

a. *General Survey.* A survey of all known abandoned dwelling sites, i.e. the district northeast of present-day Kubura village, Tōbaru, the area of the former Shimanaka village, Uranu, Hinai and Sonai, was carried out. All cliff burial sites were thoroughly investigated. A relation between them and the abandoned village sites was definitely established. The pottery characterizing both types of sites consists of *panari* and celadon.

Aragusuku Island, locally known as 'Panari', traded a pottery known as *panari*; it is a locally made, badly fired pottery tempered with crushed shells. Prehistoric coarse pottery with sand, and later, crushed shell admixture and equally low firing which is also found all over the Yaeyama islands is also called *panari*; it is generally considered to be the prototype of recent *panari*. Celadon is a greenish glazed porcelain of Chinese origin.

As all finds of *panari* and celadon at dwelling and burial sites were surface finds, we decided to carry out several trial excavations to get an accurate stratification, on which to base a stratigraphy of culture sequences. We chose the following localities for trial trenches: Shimanaka ward of Sonai town, where reports of burials dug up accidentally and *panari* and celadon surface finds abound; Nakamadone, the site of the abandoned Shimanaka village (Naunni branch village area); and Tōbaru, at the eastern extension of Hinai-Uizato. These trial excavations are fully described below. But they gave us no detailed evidence of the cultural situation prior to the arrival of celadon.

The entries in the chronicle of King Seung Chong of the Korean Yi 李 Dynasty show that no celadon, or other porcelain was then known in Yonaguni. It also recorded that the island was found lacking in iron pots, iron tripods, spoons, dishes, bowls and chopsticks.

Yonaguni pottery consisted of clay tripods, sun-dried and fired over a straw fire. Five or six days of rice-boiling would be the end for such a vessel.

Celadon and other Chinese porcelain had thus not yet been introduced by the end of the 15th century; all pottery was of the *panari* type. However, soon after the conquest by Nakaya Kanemaru (A.D. 1522) and under the firm control which the central government exercised on the newly acquired islands, celadon and

other objects of Chinese origin began to reach even Yonaguni. The post-conquest (?) Uizato village site suggests in its lowest layer a pre-celadon culture pattern, whereas celadon was in frequent use at the Shimanaka site we tested. The location of our Shimanaka trial trench proved singularly unfortunate, coinciding with Nauni, the area of longest occupation and, therefore, reflecting the cultural position towards the end phase of occupation.

The Korean drifters report a blacksmith in Yonaguni, who made no ploughs, but small iron hoes which were locally called *bira*—no doubt, the tools which are still in use there. Iron must have been, at the close of the 15th century, in fairly common use.

Stone implements, on the other hand, are to date known in very small numbers. Only two examples, one, unearthened at Kaneku hamlet, Shimanaka ward, Sonai town and another one turned up during tillage of a field west of Hinai-Uizato were seen by us (Fig. 2). Both are weighty, chipped adzes with centre-edged cutting edge, and are probably cutting, or woodworking tools. We also saw two hammer-stones (probably for shell and nut cracking) in the possession of local collectors.

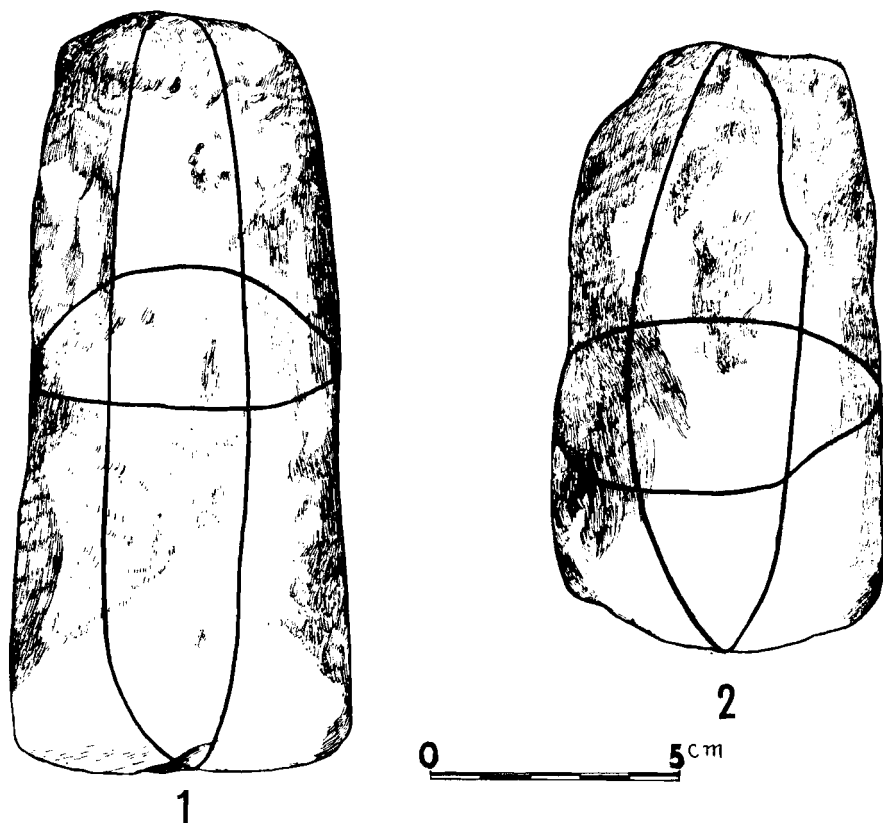


FIG. 2. Stone implements from Yonaguni.

- a. Adze made from a black, hard stone. Found in location 22. See Map (Fig. 1b).
- b. Axe found in Kaneku Ward, Sonai Town.

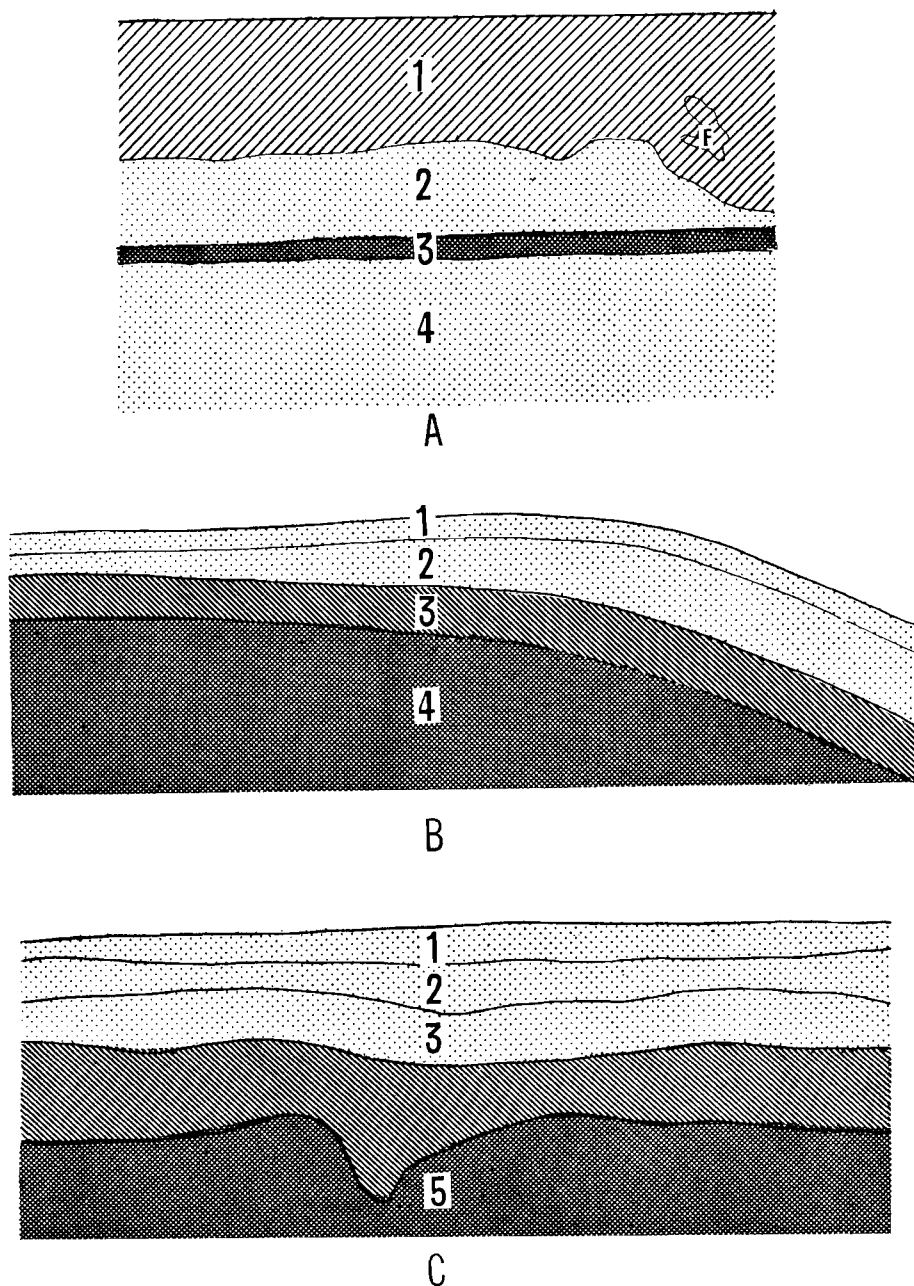


FIG. 3. Stratification of Yonaguni trial trenches.

a. Kaneku Ward, Sonai Town. Location 1 on Yonaguni map (Fig. 1*b*). 1. Culture containing surface layer; F. Intrusion of fresh sand; 2. Fresh sand layer of light ochre colour; 3. Pumice stone layer; 4. Sterile fresh sand.

b. Nakamadone. Location 7 on map. 1. Top soil; 2. Culture containing blackish-earth layer; 3. Reddish-brown layer of efflorescent coral; 4. Coral mother rock.

c. Hinai, Uizato. Location 25 on map. 1. Blackish-brown topsoil; 2. Fresh sand deposit; 3. Black-earth layer; 4. Dark-brown soil layer; 5. Ochre-coloured sterile sand.

When, during our survey, we produced photographs of stone implements, we were told that similar objects had sometimes been found, but in ignorance of their importance, they had been thrown away. The site of abandoned Shimanaka village is said to have been particularly rewarding in this respect.

No suggestion as to the cultural context in which these stone implements were used may be ventured on the basis of our trial excavations. Were they contemporary with the *panari* pottery of pre-celadon times? Are they still older, or do they belong to a different cultural context? A more thorough investigation of the former dwelling sites of Anaihamate, Shimanaka, Kuburafurishi, Tebaru, Tōbaru, Uizato and Dateg may give answers to these questions.

b. Trial excavation at Kaneku hamlet, Shimanaka ward, Sonai town. The township of Sonai is in part built on a sand beach. The formation of this sand beach obstructed and prevented a smooth outlet of the Tabaru river into the sea and gave rise to the belt of inundated lowland, accompanying the lower course of the river on both sides.

Having been told of frequent accidental discoveries of burials in this area, besides abundant surface finds of *panari* and celadon sherds, we decided on a locality of Kaneku hamlet, Shimanaka ward, for a trial trench. The locality was a vacant plot next to a piece of land where one Fukuzato Kenichi had, returning from overseas service after the Second World War, in the process of well-digging, found a complete, fully extended adult skeleton.

Our trench measured 3 by 6 by 2.5 metres, there were no human remains. We clearly identified a stratum containing culture deposits and the layer containing the burials (Fig. 3*a*). The whole area had been recently subjected to a process of levelling to make it habitable, during which the top layer of sand had been removed. The surface of the layer containing the cultural deposits was partly exposed; its thickness varied between 30 and 35 cm. The cultural inventory consisted of *panari* sherds, celadon, recent Chinese porcelain and 2 corroded iron items, one of them a sword (Pl. III). As the whole site had been considerably disturbed, objects of recent use were found mixed up in this layer.

Immediately below the layer there is second layer of fresh ochre-coloured sand. At a depth of 60 cm. of this layer a slight, partial intrusion of pumice stone fragments appears and develops into a fully fledged, although narrow (10–20 cm.) layer of pumice stone at a depth of 1 metre. We continued excavating to about 2.5 m. depth from the surface, but the layer of fresh sand proved completely sterile. The discoverer of the burial adjacent to our trench, Fukuzato Kenichi, indicated that the burial found by him had been situated immediately above the pumice stone layer.

The position of the body was described as dorsal stretch burial. This information is corroborated by two more reported burials in the vicinity, an adult and a child, both found in dorsal stretch position with extended arms.

The remains discovered were collected and deposited in a rock shelter above Sonai harbour, where they were pointed out to us. We subsequently removed them and put them at the disposal of Professor Kanaseki Takeo who kindly agreed to examine our entire skeletal material (*see* appended report). Suffice it to state here

that the remains were identified as aged female. An examination of the mandibula showed a complete closing of alveoli for the incisors, this could be interpreted as indicating ritual tooth expulsion and therefore, worthy of notice. A note of caution must be added. We have reason to suspect that the remains pointed out and removed by us are not those of the skeleton found by Fukuzato.

Although the local inhabitants are extremely reluctant to disclose the discovery and circumstances of such burial finds, we collected a number of such reports and, moreover, discovered other localities, where there were indications of such burials. A case in point was the discovery of a burial under an outbuilding. Permission to dig there was flatly and definitely refused by the owner who was quite aware of the nature of the remains buried there. According to an informant the owner and his sons dug them up during the night following our request and transferred them to the customary rock shelter. Due to the reiterated abhorrence shown by the whole neighbourhood to our project, we put off for the time the opportunity to clarify the historically significant problem of the stretched burials in the sand—much to our regret.

Soon after our departure from Yonaguni a stone implement was found near our trial trench by a teacher of Sonai Middle School. The implement is an adze of plutonic rock and the finder suggested that it may have been turned up in the course of earlier construction work and accidentally rediscovered by him. There is no evidence that the implement belongs to the stratum containing the burial.

We associate the upper, culture-containing layer with historic Anaihamate, presumably founded by Iriomoteans and figuring in the story of the conquest (A.D. 1522). The layer containing the burials is separated from it by a broad sterile layer. In the absence of conclusive evidence nothing can be said about these burials, but that they are pre-celadon and represent by virtue of internment in the sand and the stretched position of the body, a disposal method strikingly different from the customary multiple disposal.

Thanks to our Korean shipwrecks we know that the recently practised disposal method has not changed essentially since A.D. 1479. The Koreans write: 'If somebody dies, they put the body in flexed position into a coffin which is deposited in a rock shelter. If the rock shelter is big, 5 or 6 coffins are left there. Interment is not practised on this island'.

When after the First World War, the former Shimanaka village community migrated to its present settlement at Anaihamate, the whole area was covered by dense jungle. The people clearing the area for habitation had not the faintest notion that it was once a burial area, otherwise they would have chosen some other site. Not a single tradition is left about this, which is strange when events belonging to 16th century Anaihamate are still so vividly remembered in local tradition. In view of this and similar evidence on other South Ryūkyū islands a complete change of population in this area at one time seems a possibility worthy of investigation.

c. Trial excavation at the abandoned Shimanaka site. Our next destination was the Nusokobaru plateau, situated in the very centre of the island, where we dug a trial trench in the district of Nakamadone. The road linking Sonai and Hinai branches off west at Nusokobaru.

Our trench is situated in the middle of a cultivated field which follows the road to the west to a distance of 130 metres from the cross-roads and then turning north for 11 metres. The surface of the field is strewn with celadon, other Chinese porcelain and *panari* sherds. At this point the terrain has a slight north-southerly slope. Following this slope, our L-shaped trench measured 2 by 2 m. in east-west and 2 by 2 m. in north-south extension. Removing the loose top-soil, caused by tillage, we encountered a layer of blackish earth (10-40 cm.) which contained cultural remains (Fig. 3b). These continued into the upper part of the next, reddish-brown, rough layer of efflorescent coral. After removal of this layer, measuring only 20 cm., immediate contact with the ochre-coloured coral mother-rock is made.

The disturbed topsoil, the undisturbed blackish second level and the upper portion of the reddish-brown third level contained identical cultural remains: celadon, Chinese porcelain with an amber-coloured glaze and *panari* sherds. A stratigraphic relation of these remains to each other was impossible to deduce, but the presence of celadon dates the site clearly as post-1479, a date to be expected in view of the history of the settlement. Besides porcelain, the old indigenous *panari* pottery was in everyday use. The mouth-rim of these very sturdy, round-bottomed *panari* vessels is turned outward, ear-shaped handles protruding on both sides slightly below the mouth-rim.

The find of a boar's tusk amongst the animal bone inventory of the site confirms the post-1479 dating, cross-reference with our Korean informants revealing that in A.D. 1479 neither wild, nor domesticated pigs were known on this island.

d. *Trial excavation at Hinai, Uizato.* The western border of the Uizato area is formed by low sand dunes. In many parts of the Uizato area fragments of *panari*, celadon and other porcelain are contained in the shallow top-soil. This top-soil is in some places so shallow, as to expose the coral rock foundation. The culture deposits are completely roughed up and exposed by farming activities. In spite of this, we decided to dig a trial trench at a place called Tōbaru, within the area of abandoned Uizato village, where one Maetake Matasuke is reported to have found a stone implement subsequently lost. The coastal strip immediately adjoining is reputed to have been an area where the corpses of small children were abandoned. The stratification exposed there was as follows:

One layer of blackish-brown top soil (5 cm.), followed by a fresh sand deposit (13-16 cm.), a black earth layer (15 cm.), a dark-brown fourth level (15-32 cm.) and ochre-coloured sterile sand (Fig. 3c).

In the first three layers the remains of many a shell meal were found, sea shells and land-snail shells being about equally represented. Both are favourite food items to this day.

Celadon sherds appeared in the upper part of layer IV, with *panari* fragments slightly below. This stratification suggests a period prior to the appearance of celadon on the local scene, when only *panari* was used.

It corresponds, in other words, to the cultural situation described by the Korean drifters and can be looked upon as mutually confirmative, even allowing for the limited scope of our trial excavation.

e. Burial sites. Proceeding along the road from Sonai to Kubura, a number of subterranean caverns, locally called *dannu no gama*, are found in the vicinity of the road near to its Kubura end.

The first cavern we entered contained human remains surrounded by a semicircle of coral stones. Accompanying the remains were two perforated shells. In the next cavern we again encountered human skeletal fragments, this time in association with beer-bottle splinters, the latter probably the remains of a subsequent drink offering. The third cavern had clearly been interfered with and was completely empty. Successive caverns we entered were devoid of conclusive finds. We do not believe that the use of subterranean caverns as bone depositories is very old—not only in view of the beer-bottle splinters, but also because the perforated shells contained in the first cavern are not necessarily indicative of antiquity. Identical, but, of course, unperforated shells are to this day used in some of the local shrines to offer spirits to the deities.

Rock-shelter burials were found all along the western cliff in the environment of the abandoned Tōbaru village. Amongst the human remains removed by us from this site, specimens suggesting ritual tooth expulsion were collected. An identical form of tooth expulsion (lateral incisors) can be observed on Yayoi-time skulls excavated from the burial site at Hirota, Tanegashima 廣田, 種子島. It was also practised, until very recently, by some tribes in the interior of Formosa. Ritual tooth-expulsion in the southern Ryūkyūs poses the following questions: what connection is there between this custom in the southern Ryūkyūs and Formosa? On what kind of individuals was tooth-expulsion practised, only a small fraction of the skulls seen shows this feature? Why is there no trace of this custom in the memory of the local population?

Associated finds at this site were fragments of Chinese porcelain with an amber-coloured glaze.

The bluff district of Tsuingata, near the abandoned Shimanaka settlement is another rock-shelter burial area. At the south-western extremity of this district, the Tabaru river in winding its way northward forms a natural barrier. There we found at several points, but for the excessive vegetation, in sight of each other broken burial jars in association with human remains and one completely preserved burial urn filled with human bones, jars and urn being of the *panari* type pottery (Pl. IV). One jar fragment with ear-shaped handles fixed horizontally to its body seemed noteworthy. The jars are of the round-bottomed, waisted type, the mouth-rim being slightly outturned (Fig. 4, 1). One jar was punctured near the waist.

The urn is a very wide, cylindrical and stable vessel (Fig. 4, 2). It is also round-bottomed, but the curvature is so slight as to typologically represent a transitional

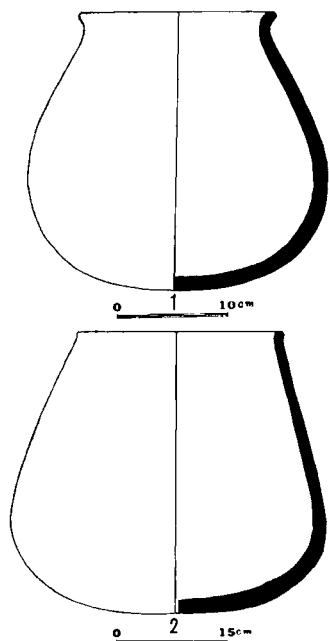


FIG. 4. Tsuingata bone jars.

form. Like the jars, the urn was also perforated near the centre of the bottom (see chapter on contemporary burial urns).

The jars are typologically very similar to the *waga* cooking jars of the Yami of Botel Tobago 紅頭嶼, whereas the urn is very reminiscent of the urn excavated by Dr Kano Tadao within the village boundaries of Imoroud, Botel Tobago (Kano 1946: 84). The similarity does not only apply to the form, but also to the type of firing.

This similarity, bordering on identity, also includes the round-bottomed prehistoric cooking jars found ubiquitously all over the Yaeyama islands. The variety with the ear-shaped horizontal lugs is also known from the prehistoric inventory of East Formosa (Kaneseki and Kokubu 1957a: pl. 3). Similar vessels can be seen among the finds from Hsiao-liu-chu 小琉球 (*ibid*). It must be emphasized that this conspicuous type of pottery has never been found in Japan.

Some relation between Yonaguni and Botel Tobago is not only suggested by the above pottery types, but also strongly indicated by other culture elements and even occasional Yami-like human types. May it suffice in this context to mention that several men, now in their seventies, can remember that many a wreck of a gondola-shaped plank-built boat drifted to the shores of Yonaguni in their youth. When we inspected the strip of coast indicated, we found there large numbers of coconuts washed ashore, this fact suggestive of a current bypassing both islands. Consulting the *Yaeyama tō yurai ki* on the origin of shipbuilding, we understand that shipbuilding started after two children of Taketomi village saw in olden times a gondola-shaped boat near Hosaki and tried to imitate it. By and by this new art also reached Ishigaki. This traditional evidence would strongly indicate an acquaintance with the gondola-shaped boats built in this area only in Botel Tobago.

As the above burial jars and urn were situated in a ravine, we again climbed up on the plateau and after walking several hundred metres came to a cairn of loosely piled coral stones in the middle of a field. The cairn is identical with the one illustrating Solheim's account of Philippine prehistory (Solheim 1953: 158). Two farmers who had sheltered us during a violent downpour in their field hut, named the family to which this grave belonged, but were uncertain about the exact relationship between the present head of the family and the remains contained in the cairn. The cairn being, however, only a stone's throw from their field hut, they remembered that the site was still annually cleaned and visited at the occasion of the 'ancestor's New Year' (16th day of the first lunar month). On that day the whole family assembles before the cleaned grave and partakes of a meal. After the meal, the *shamisen* is played and songs are sung to entertain the departed ancestors. We were allowed to remove a few top stones of the cairn and have a brief glance at a large brown bone jar of Chinese provenience, filled with bones, around which the coral stones were built up to a cone. When we carefully replaced the stones, one of the farmers remarked: 'Superstitious people believe that exposure of ancestral bones to the rain will provoke the wrath of the ancestors'.

Subsequently, we encountered several more of these cairns, in all instances similar in appearance, and situated in the fields; they showed signs of recent visits and could without exception be identified as to owner. We suspect that these cairns were used until very recently, or may, in some instances, be used even now,

by families with low economic status. We were unable to confirm this beyond doubt for lack of time.

Numerous human remains were found in a cave locally called *damato-baka*, near the southern fringe of the former village Donanbaru, at N'dan. Skeletal remains and chopped-up planks of Deigo-wood coffins in considerable quantities are seen there. Deigo is a material which can easily be cut lengthwise, as well as crosswise while it is raw. Coffins are therefore fashioned from raw wood. Some individuals prefer to have their coffin made well in advance and refer to it as 'my boat'. The coffins we saw at Damato-baka were made of neatly planed planks in dovetail construction. Human remains are scattered over the whole floor space of the cave, skulls, long bones and small bones in utter confusion.

When Sasamori Gisuke (Sasamori 1894) visited Yonaguni in A.D. 1894, he found the skeletons neatly piled up individually. He concurred with local opinion and somewhat naïvely believed this cave was the resting place of wandering warriors of the Heike (a Japanese military dynasty defeated at Dannoura near Shimonoseki in A.D. 1185); he offered a written prayer for the peace of their souls, as he relates in his travel diary.

Ikema and Arazato (1957: 83-84) state that swords, saddles, cuirasses and various utensils including comma-shaped beads (*magatama*) were preserved there until the beginning of the Meiji era (1867-1912), but that Japanese officials and travellers had subsequently roughed up the cave and pilfered the contents.

Our own secret visit to the cave fell in the last days of May when the first crop of rice was ripening and contacts with graves forbidden. The local people assume a deep connection between the ripening crops and ancestral graves.

For this reason we did not want to start excavating, though it was our only hope to solve the riddle of the occupants of Damato-baka. In the absence of a trial trench, we think it probable that Damato-baka shelters the remains of Nakazone and Nakaya's forces who died in the conquest of Yonaguni (nearby Donanbaru village having been sacked) or, alternatively, and even more likely here rest some officials sent to Yonaguni from the Central court. A future excavation in this cave may give some reply to these surmises.

Another belt of rock-shelter graves is found at the south bank of Tabaru river within the Sonai area. Some of these shelters seem to be still in use. Their entrance is blocked up by coral stones, fresh beach sand is strewn in front and food and drink offerings are made, and incense sticks burnt. As far as we could ascertain these shelters do not contain any coffins, but we saw jars containing skulls and long bones deposited in them. Locally the district is known as *Tsah nun kan nu daya* (house of the grass gods). *Tsah* nowadays refers to rice plants, formerly it is said to have denoted plants in general. At sprouting time of the rice, people must observe *tsah ba munun* (continence). This area, which could be called one huge ossuary, yielded celadon sherds in profusion, but we did not find any *panari*.

Rock-shelter burials were also encountered at Tarumai in the Hinai area. They were accompanied by great quantities of celadon and *panari* sherds.

The southeast cliff above Hinai bay has some natural caves. There, as at Damato-baka, human remains, chopped-up coffins and grave furniture (wooden pillows,

etc.) were found. No Chinese, but a few splinters of Japanese porcelain accompanied the burials.

At large, the rock-shelter burials represent the second phase of a multiple disposal method, being ossuaries for human remains after ritual purification of the bones (bone-washing).

The caves present a variation. The bodies were obviously deposited there complete with coffins and grave furniture (first phase of this multiple disposal). At a later time the bones were washed and neatly piled up individually, the undecayed coffins demolished, but not burned. Mori Motooya who came for land-measuring to Yonaguni in A.D. 1611 mentions the Damato-baka cave.

Although the method of disposal of the dead has not changed from pre-celadon (Korean witnesses) through mixed *panari*-celadon times to this very day, the overwhelming majority of the population has given up rock shelters for the turtle-backed tomb or its less elaborate substitutes.

f. Megalithic structures. Megalithic structures observed by us on this island included stone pavements, paved wells and communal washing and bathing places, stone platforms, stone-garden walls, water-storage tanks, pig troughs, menhirs and sacred stones. Most of them are nowadays thoroughly profanated and devoid of religious meaning.

Stone troughs which are beautifully cut round, or oblong, serve at present for pig's feeding troughs or containers of drinking water for fowl; they are found everywhere.

Almost equally universal is the distribution of huge rock-cut containers which are now used to store water or for ornamental ponds. We suspect by their measurements and the fact that they originally stood in the fields that some were actually rock-cut coffins. Their appearance in Yonaguni would not be surprising in view of the fact that they are well known in nearby East Formosa. However, we were unable to either confirm or disprove this and leave it to future research.

When we visited the residence of Maihama Shinichi, reputedly one of the oldest houses left in Sonai, we were amazed by a number of beautiful menhirs, used as pillars to support the back kitchen (Pl. II *b*). Upon enquiry the lady of the house told us that in former times such huge upright stones were plentiful in the marshy fields along the Tabaru river and that people had gradually removed them to serve as pillars in their houses. In her childhood (the lady is in her sixties) some of these menhirs were still standing *in situ*. A particularly striking example of an 'ornamental pond' found in the garden of this residence (estimated measurements: 1.5 × 1.2 × 1.0 m.) was said to have originally stood in the nearby fields.

Consulting our Korean friends on house construction towards the end of the 15th century, we are given the following description: 'The rooms have no walls, there is also neither backroom, nor are there windows. The eaves are short in front, but reach the ground in the back. Reed mace is used for matting. A separate granary in which the harvested rice is stored is erected in front of the living room'. At present, no house exactly corresponding to this description can be found. Only the *shira* (rice granary) is still built in front of the living room and there are some houses the walls of which are made of reed mace (Pl. V *a*). However, the roof

construction described by the Koreans recalls the houses of the Paiwan in East Formosa, and when we got our first glimpse of the back kitchen of the Maihama residence, we both exclaimed simultaneously 'Paiwan!'.

The contemporary houses of Yonaguni are surrounded by high walls, generally consisting of loosely piled coral stones. The living quarters of the residence face the front opening of the wall and an inner wall of the same dimensions as the opening in the front wall, consisting either of coral stones or shrubs ('ghost wall') shields the inhabitants from sight and also from evil influences. To increase the evil-repelling power of this inner wall, a menhir is often erected at the outside foot of the wall. Sometimes three Chinese characters 石敢堂 (Japanese reading: *sekkantō*, meaning of the three characters respectively, 'stone can withstand') are incised into the menhir, or in its absence into the wall. Some wealthy residences boast a new-fangled concrete wall, but the three characters are never omitted. A menhir, or those three characters are invariably to be found at cross-roads or on the side of a house-wall, facing the public road. These magic obstacles have a very wide distribution, being known from China, continental Southeast Asia (Loofs 1961: 51), the Ryūkyūs and as far north as Honshū (Japan).

Undisguised religious meaning still adheres to those menhirs which find use as prayer stones, either within the sacred shrine compound, or standing isolated in a grove, like the Sonai rain-prayer stone, or a small stone-altar in Hinai which is the focal point of many customary rites and others which are born of the need of the moment. It is one of the serious and incomprehensible lacunæ of our Yonaguni research not to have investigated this stone-altar more thoroughly. Its interpretation as originally an earth altar as found in China and amongst the Formosan aborigines (see i.a. Eberhard 1942: 115; Ling 1958: 1-58) may be correct for at least some of these stones which stand in sacred grooves (see later chapter). As far as the Hinai stone-altar is concerned, we were told that it 'belongs' to a certain family which is also responsible to see that the prescribed rites are performed on specified dates. To own such stones is considered very fortunate, but also a very great responsibility, because the stones are connected with the fertility of fields, animal and man of the whole community. It was also made clear to us that the stones which are the functional and spiritual centres of every shrine compound are seats on which the ancestral deities descend.

The isolated menhirs, originally erected in the fields have without exception been removed. In a conversation with an old gentleman about crops, we were told that one of his fields was particularly fertile. It used to be the favourite field of his late grandfather who had told our informant that after his death he would return from time to time, to this field, sit on the stone and ensure its continued fertility.

Menhirs are still seen standing in the fields of neighbouring Ishigaki. They are there popularly believed to be the seats of the ancestors who, from time to time, visit this world and like to rest on these stones from which they have a view over their former possessions.

Closely connected with these ancestral seats is the idea of the megalithic assembly place which is classically represented in some Ryūkyū *ugan* or *utaki*, the centre of social and ritual life (Council, ritual and dance) (see Heine-Geldern 1959: 170). A connection between the *ugan* and certain families, or village quarters can be

observed (founder). On Ishigaki everybody belongs hereditarily to a certain *ugan*, social prestige being to some extent dependent on the relative age of the *ugan* in question. This aspect appears less important on Yonaguni.

Heine-Geldern (1959: 165) says that megalithic structures are the material expressions of a religious concept centering around the preservation of the eternal chain of past and future generations. This concept, which is still found in Yonaguni, suggests that the stone structures do belong to the megalithic complex as defined by Heine-Geldern (1959: 166). Among the many aspects he mentions, only a connection of the stone structures with the ancestors and their fecundity-increasing power can be found in Yonaguni, or so it would appear on the basis of our short and superficial observations.

The megalithic structure is a link between the living and their dead ancestors as well as with future generations (Heine-Geldern 1959: 178). Living and dead together form the clan, an idea which is well exemplified in the clan tombs and ossuaries of Yonaguni and the Ryūkyūs generally. The strong emotion which binds the living to their dead is expressed in the bone-washing ritual, the ceremonial meal partaken of by the whole family in front of the tomb, the gruesome duty of watching the changing face of the dead for a week, etc.

We venture an identification of the mortuary feast, held 33 years after someone's death as a post-mortal feast of merit. As far as we know, no monuments are erected to the memory of the dead who, on the contrary lose their individual identity completely. (Emptying his bones into the general ossuary, the burning of his tablet, joining of the anonymous host of ancestral deities.) However, this feast has all important repercussions on the fate of the deceased in the ancestral land. The more lavish the display, the better is his fate in the beyond and the more cordial the reception by the ancestral deities who do not need to feel ashamed of the newcomer. The same goes for the surviving relations who would completely lose face in their community, if they did not completely strip themselves of all their wealth on such an occasion. These conditions also apply to a feast of merit, the prestige aspect being in our case most strongly felt in its negative.

No final opinion on the megalithic of Yonaguni can be ventured on our scanty observations, but it is clear enough that it has left an indelible stamp on the culture of the island. Though most of the material manifestations in stone have already been profanated, the spiritual background leading to their erection is still alive.

4. *Ethnography*

a. *Death ritual.* The description found in *Yonaguni Island Record* (Ikema and Arazato 1957: 34-36) supplemented with our own observations, gives a fairly complete picture of Yonaguni death ritual.

In our definition of 'death ritual' we follow Stöhr (1959: 1) who says: 'the death ritual includes all actions and attitudes of a society on the occasion of the death of one of its members'. Other aspects like soul-conceptions, views about the after-life, etc., are treated in parenthesis.

The present-day method of disposal of the dead in Yonaguni is a multiple one, i.e., the relation with the deceased is not cut off by one final act, but by a series of actions.

The first phase consists in depositing the coffin on a stone platform (*shiruberashi* = fluid reducer) in the front part of the tomb (turtle-backed tomb, simpler grave or cairn). After decomposition of the soft parts of the body (generally not less than three years) the second phase, ritual purification of the bones and their deposition in a bone-jar takes place. This bone-jar is placed on a ledge in the tomb which holds a number of such jars and is one step higher within the tomb. By this action, the deceased is promoted to the rank of ancestor. Thirty-three years after death, the contents of the bone-jar are emptied into the general ossuary at the innermost and highest level of the tomb. At the same time the spiritual transformation into ancestral deity is completed. The Yonaguni disposal method is therefore in its essentials identical with the disposal method practised all over the Ryūkyū island chain which has been treated in a separate paper ('The death ritual of the Ryūkyū Islands'. Tenth Pacific Science Congress, Honolulu 1961).

The moment death is confirmed, the chief mourner is required to call out to the departed: in the case of a dead father '*aharido iyaah*', for a dead mother '*aharido abta*', for an elder brother '*aharido ubta*', for an elder sister '*aharido ubaneh*', and for younger people in general '*aharido*' is appropriate.

'Aharido' means 'pitiful' and the prescribed additions mark a one-sided emphasis on consanguinal relations in the concept of the chief mourner.

Only after proper observation of this duty does the assembled family break into loud weeping. The sound of the wailing informs the villagers of the death, if they have not been called to the house before.

The body is washed, shaved and dressed up in his best finery. The hair is adjusted and the nails are clipped. He is then laid down before the household shrine. His position is dorsal with flexed legs which are kept in position with ropes until *rigor mortis* sets in. The hands are placed on the breast, the fingers intertwined. In the meantime all relations, friends and fellow villagers have assembled and the wailing increases in volume. A death-watch must be kept up until the dead is deposited in the tomb, the wailers taking turns in their duty besides the corpse. Others prepare an animal for sacrifice with subsequent distribution amongst the mourning guests. Depending on the economic standing of the family in mourning the quadruped is either ox, pig or goat. Pigs are preferentially used. For those working as wailers, or lending a hand in another capacity, a treat consisting of soup taken from the bones of the slaughtered animal, must be prepared.

Meanwhile the corpse is placed in the coffin, a plain white box made of *deigo*-wood and measuring approximately 70 by 90 by 120 cm. A small separate box is prepared for the grave goods. They consist of 7 rice-balls, bean-paste, tea, tobacco, personal effects like artificial teeth, eye-glasses, nail clippings, etc. A small bag with seeds, rendered sterile by boiling, is hung from the deceased's elbow.

Before the funeral procession transporting the coffin to the tomb sets out, a woman of the deceased's household deposits a scrap of the straw mat in which the dead has been wrapped—on the village dump (on the beach or beyond the village border). This woman covers her head with a kimono under which she also hides her face. She must grasp stalks of *kuwaso*-taro in both hands, circle the house three times and holding the stalks at the wrong end, knock thrice at the northeastern entrance of the house.

Before the dead finally leaves his home, the assembled mourning guests must be served spirits and a portion of the slaughtered animal.

The coffin is then placed into the roofed-in funeral chair, locally called *mushiro* (straw mat) which is decorated with dragon's heads at all four corners. The wailing-women, their heads covered with cloth, accompany the chair which is borne by men, on both sides. The chief mourner supported by two friends leads the procession and the wailing chorus. The general consensus of opinion demands streaming tears and a running nose in a decorous mourner.

At the burial place a short prayer is offered and the coffin deposited on the stone platform in the front part of the tomb. The opening is then closed by a stone and loam (recently also concrete), the place in front of the grave is strewn with fresh beach sand, the food and drink offering is placed and incense sticks burned. A representative of the chief mourner thanks the assembled mourning guests and has them served on his behalf both meat and spirits. Very recently handkerchiefs or towels are sometimes distributed as a substitute for this feast.

On the way from the burial place (not all graves are within the communal burial area), the mourners go to the sea, wash hands and feet and crawl through a ring made of intertwined miscanthus, a custom exactly duplicated amongst some Formosan mountain tribes. It is also connected with the custom of placing part of the dead man's straw mat on the village refuse dump; may it not be a remnant of the older custom of depositing his whole property there, a procedure which is also characteristic for some mountain tribes of Formosa? (Kaneko 1955).

Returning from the sea, some of the mourners will pretend to hold malodorous objects to discourage the spirit of the dead from following them home.

The relations have the duty to visit the grave daily for one week, daily replacing food and drink offerings and burning incense sticks. The name of the deceased is called out and this action considered to be a substitute of the required duty of actually watching his changing face.

On the third day a sketch-map is incised into the ground in front of the tomb. Pointing out various portions of the plan, the dead is informed that here are his future paddy-fields, millet-fields and sweet-potato fields which he must cultivate with the seeds given to him. He is told not to return to his former fields or to attempt to work with his former associates.

After one week the members of the mourning household run the distance between their house and the burial place seven times, hulling and chewing rice on the way. Having completed these circumambulations, a meal consisting of crabs and rice-balls is partaken of outside the front-gate. The crab is in many parts of the Ryūkyū islands considered to be the messenger of the gods. However, Fürer-Haimendorff (1943) and Loofs (1961: 67) draw attention to a connection between megalithic rituals and crabs in Orissa and continental Southeast Asia; the crab, in one case, gains the dead access to the beyond, in another, is a substitute for a buffalo sacrifice to the dead.

In Yonaguni the ritual is called *sagai* and marks the final parting from the deceased who is at this occasion informed that he now finally belongs to the world of the dead where he should live joyously with the ancestors, and that any further intercourse with the world of the living is undesirable.

Remembrance services are held on the 3rd and 21st day, 3 months, 3 years, 13 years and 33 years after death.

Some families avail themselves of the services of a *yuta* (ghost-caller) [a special paper on this subject is in preparation] on the 21st day. The present circumstances of the deceased, his wishes and orders can be relayed through the medium of the *yuta*.

Three years after death the ritual cleaning of the bones takes place. It is usually performed by seven elderly women who in turn wash and dry the bones, after ritually crying three times. The bones are then placed into the jar in position corresponding to that of the skeleton. Parts of the body, other than bones and the coffin, are burned. Finally a piece of tissue paper is placed over the skull and the cover of the jar closed. A hole is knocked into the jar near the bottom and the jar placed on a ledge containing these bone jars within the tomb.

After 33 years a great feast must be given for the deceased who has now completed his transition to ancestral deity. The name tablet of the dead, until now preserved in the household shrine, is burned and the contents of his bone-jar emptied unto the general ossuary platform which constitutes the highest and innermost level in the tomb. On the proper execution and lavishness of the subsequent feast the happiness of the deceased in the next world depends, not to mention the social effects on the survivors. We were repeatedly assured that many families who have to give such a feast used to the last their financial and economic resources and are completely ruined by the event. In Kabira village on Ishigaki island we were told that some people in the towns had ceased to dispose of their dead in the traditional manner in favour of cremation to escape financial catastrophe.

During one of our visits to the Sonai burial-ground we were shown the funeral paraphernalia, amongst others the dragons' heads and the sculpture of a bird which is hung on the funeral chair under the dragons' heads.

Stylistically the dragons' heads are completely South Chinese. Whether the style has reached Yonaguni directly or via Okinawa like the turtle-backed tomb is uncertain. The dragon has, apart from Ryūkyū, an important function in the death ritual of northwest Kyūshū and the coastal portions of Honshū facing the Korean channel. Broadly speaking those are the areas where South Chinese, or better Tai and Yüeh influences can be found.

The funeral bird has, of course, a much wider distribution besides the above areas, Korea and most areas of Southeast Asia where it usually serves apotropaic functions.

The Yonaguni funeral bird is in style South Chinese. The bird depicted is a black fowl which has important ritual functions in some areas (see chapter on domestic animals); some authorities believe it is the indigenous Southeast Asiatic fowl.

The question of sarco-cannibalism was the subject of a separate paper (Tenth Pacific Science Congress, Honolulu 1962), and will not be considered here.

b. Agriculture: (i) *Rice*. In the report of our Korean castaways, rice was the staple crop of Yonaguni in A.D. 1479, and though millet was cultivated, it was disliked as food.

They describe the method of rice cultivation as follows: 'Dry rice is sown on fields prepared by clearing and hoeing with a small hoe. About the middle of the twelfth month (lunar calendar) cattle are made to trample all over the paddy-fields and the rice seeds are sown without any further preparation of the soil. The seedlings are transplanted during the first month and have grown to a height of 30 cm. in the second month. By the fourth month rice is ripening and reaping starts, at the very latest, during the fifth month. The roots of the rice plants are left in the ground and soon start sprouting again, yielding an even larger crop at the second harvest. Before this second harvest, in the seventh or eighth month, a period of continence is enforced; making noise is considered especially obnoxious. All hollering or blowing on grass-trumpets is strictly forbidden, the volume of the human voice has to be subdued and even pretending to blow on a reed is taboo. Harvesting is done by a sickle, the harvested rice bundled by straw and stored in a granary. The stalks and grains of rice are separated by being drawn by the left hand through two bamboo tubes held between thumb and forefinger of the right hand. The rice is then pounded by a foot-mortar'.

The hoe mentioned in this very detailed and enlightening report seems to be the iron-bladed implement used to this very day; in another context the Koreans say that iron hoe-blades are made by the local blacksmith. Even the name *bira* for this tool has remained unchanged to this day.

What kind of agricultural tools were used before the introduction of iron is still problematic. Functions as hoe blades are out of question for all stone implements known of this island to date. They may, however, have been the forerunners of the iron axes mentioned as cutting implements by the Koreans. As far as local traditions go, old people told us repeatedly that their forebears used wooden digging sticks before the introduction of iron. This statement seems to tally with the archaeological find situation of the present moment. In China, Eberhard (1942: 75) ascribes the digging stick to Yao culture.

The reported avoidances at the time of *hoharami* (pregnancy of the rice-ear) relate Yonaguni with many areas of Southeast Asia where the same rules are observed to avoid startling the corn-mother, or corn-spirit (Heine-Geldern 1923: 914).

The storing place of the crop is referred to as 'high granary', meaning presumably a house-type granary, for which this term is generally used. However, the granaries seen in Yonaguni today are not of the type provided with walls and roof. They are elevated bamboo-floors, laid across coral stones. The sheaves are piled up conically on the floor, the grains towards the centre, the stalks outwards. Whenever rice is wanted sheaves are pulled out by the stalk. This type of granary is known as *shira*, its literal meaning is 'parturition hut' (Pl. V b). This term is not known on the island of Okinawa. With the exception of the Yaeyama island group, the type of granary encountered in the Ryūkyū chain is the house-type granary, i.e. a storage room on piles, complete with roof and walls. However, the conical granary is not even known on all islands of the Yaeyama group, whereas we did not find one specimen of the house-type granary in Yonaguni. A variety of granary on an elevated floor, sometimes encountered in Yonaguni cannot be considered a genuine house-type.

On the granary construction and the distribution areas of the two types we offer the tentative suggestion that the house-type granary was originally designed for the storage of grain crops which, like millet, are reaped by the ear and therefore, require a proper chamber for storage. If our hypothesis is correct, the house-type granary would be older than the primitive-looking *shira*. The presence of the house-type granary in ancient Japan (on *dōtaku* 銅鐸, mirrors and *haniwa* 埴輪) would suggest not only rice, but also intense millet cultivation, a possibility which has not been much considered until now. To support our hypothesis may we say that, at least in Yonaguni, reaping by the ear and the house-type granary were earlier than the *shira* and reaping by the stalk which demanded a sickle.

The separating method mentioned by the Koreans in the absence of thrashing is at present no more employed in Yonaguni, but can still be observed on Amami Ōshima where it is still used by some particularly conservative people.

In order to identify some rice species from Yonaguni, we returned with a sample of a variety called *haneji* and locally considered to be the oldest species surviving to modern times. We were greatly disappointed when Dr Hamada Hideo identified it as a *japonica*, in some localities known by the name of *nagohoka*, which was introduced into the Ryūkyūs some 40 years ago! No rice species of any antiquity having survived on the island, we resorted to traditional local names.

The word-family *-mai* is found in names like *ini-mai* (glutinous rice), *tsū-mai* (white-stalk rice), *muchi-mai* (glutinous rice), *ushi-no-mai* (red variety) and *uma-no-mai* (red variety). The word-family *-ine* is on the contrary hardly represented in the Yaeyama group, but not completely absent as shown by Yonaguni *ini-mai*, a rare combination of both linguistic stocks. However, the *-mai* stock is the one predominantly found in Yaeyama, whereas both stocks coexist almost equally in the areas to the north (Okinawa, Amami Ōshima, South Japan). The variations most frequently encountered are *me* of the *-mai* stock and *inni*, *nmi* of the *ine* stock. In ancient Japan *ine* and *yone* coexisted with *kume* or *kuma*, the distributional area of the latter coinciding with areas of rich rice production.

The distribution of the *-mai* stock is not limited to the above areas, but includes the east coast of Formosa, Hainan, the Philippines and Indochina. The area nearest Yonaguni being Formosa we note the following variations from there: *lu-mai* used by the Puyuma (Panapanayan), *m.mai* used by the sinicized Kuvalan front-hill tribe and *tsū-mai* used by the sinicized Ketagalan, the last identical with Yonaguni: *tsū-mai*.

As far as rice nomenclature is concerned we must note the presence of two linguistic stocks within the Ryūkyūs. One stock which connected the Ryūkyūs with Formosa and Southeast Asia and spread in south-north direction. The second stock (*ine*) diffused in the contrary direction, weakening in intensity in relation with the distance from its centre of diffusion. This movement may be contemporaneous with the spread of Sue 須恵器 pottery from Japan to the Ryūkyūs. (Sue pottery is a bluish-black, unglazed pottery. In Japan it is contemporary with the latter half of the burial-mound period, but survived into Nara and Heian times. For ritual purposes it is still manufactured to this day. Its southward spread into the Ryūkyūs was a very slow process.)

The complete absence of stone reaping-knives on the whole Ryūkyū chain has been a matter of considerable speculation. However, stone reaping-knives are also absent from the prehistoric inventory of northeast Formosa (Kokubu 1959a: 294), whereas the Manobo of the Philippines do their reaping with shell knives. We believe we have sufficient evidence to suggest the use of shell knives for prehistoric Ryūkyū (see later chapter).

The technique of using cattle to trample the fields before sowing, observed by the Koreans in A.D. 1479, has not been abandoned by the Yonaguni farmers to this day.

This technique has been termed the 'Malaysian method' by Dr Uno Enko (1941) who considers this method to be a special developmental stage below the Hackbau level. The animals used are either water-buffalo or cattle and the method is reported from South China, Timor, Banka, the south coast of Sumatra, the Bantam district of Java, Sarawak, etc. According to Uno the method is very suitable for marshy ground (natural paddys) and very rarely applied to dry fields. We therefore, very much doubt that this method is really as primitive as Dr Uno thinks, unless his usage of 'primitive' really means merely a low level of technical skill. Agricultural methods identical with those of Yonaguni are reported from among the Li of Hainan (Stübel 1952: 99) and South Kwantung province (Lin 1930: 853).

From the above facts we have no hesitation in assuming a southern origin for the rice-cultivation of Yonaguni.

(ii) *Taro*. The southern root crops of Taro (*colocasia antiquorum*) and Yam (*Dioscorea*) hold an important position in the diet of the Yonaguni islanders. Our Korean castaways have an entry about gigantic taro-roots on Iriomote, but draw a blank for Yonaguni. Can it be that they overlooked it in their excitement over rice being the staple crop? As stated in the *Yonaguni jima chō seiyo ran* (1959) sweet potatoes and sugar-cane are planted on this island. Sweet potatoes were introduced to Okinawa from Fukien in A.D. 1606 and grown everywhere on this island by 1620. Sugar-cane was introduced slightly later (Kerr 1958: 156).

(iii) *Yam*. A yam variety, locally called *bung* is raised in small quantities by each household. This *bung* is ritually used in weddings, funerals and annual festivals. It must, however, be pointed out that the southern Ryūkyū *bung* has quite clearly a close relation with the Yam growing areas of Eastern Formosa (Ami).

c. *Domestic animals*: (i) *Cattle*. In the report of the Korean castaways the domesticated animals kept in Yonaguni towards the close of the 15th century were limited to cattle, poultry and cats. None of these animals were eaten. When they died, their carcasses were buried. When they were told that animal's meat is edible, the Yonaguni islanders retched with disgust. The Koreans saw cattle on all islands to the north of Yonaguni, but Yonaguni was the only place where they were not eaten in A.D. 1479.

Iba Fūyū (1939: 44-45) says that beef consumption is taboo among large portions of the peasant population of South China, because cattle take part in rice cultivation and are therefore considered sacred. He accordingly advances an analogous explanation for Yonaguni. However, cattle have generally in Southeast Asia prestige value, displaying the wealth of their owner and are therefore not consumed as staple food

(Heine-Geldern 1923: 810). The cattle-eating taboo was very possibly introduced into Yonaguni at the time of the animal itself.

There are no traditions whence the cattle came. Kubura Yukichi of Sonai told us the following story 'Once upon a time, a strange animal lived on Urabudake. People fed it and in time it became tame. This animal was a cow'.

It is a matter of speculation whether cattle, once introduced into Yonaguni, subsequently took to the jungle and were re-domesticated, as suggested by this story. The fact remains that cattle had a very widespread and comparatively early distribution in the whole area, as affirmed both by the Korean testimonial and Yonaguni tradition which ascribes an intra-insular origin of cattle.

At present cattle are left to graze freely whenever not put to agricultural work. A distinctive owner's mark is cut in the animal's ears for recognition. A record of all owner's marks is kept at the house of the individual in charge of communal pastures.

Water buffaloes were introduced in recent times. We observed that people still tend to treat these buffaloes with a reverence born of fear, whereas everybody is very free and easy with the familiar cattle.

Cattle fights figure at almost all festivals. Eberhard (1942: 175) suggests that cattle fights are fertility rites in which two parties contend as to whose cattle are to fight each other. Originally the defeated animal was sacrificed. The original purpose may have been the selection of a sacrifice, which heaven decided by the fight. The cattle fight we saw in Yonaguni would certainly add weight to Eberhard's hypothesis, although its original meaning has been lost.

(ii) *Fowl*. We found four species of domestic fowl on Yonaguni. They are called respectively:

kuromita—a small species with black plumage,

akaramita—a red feathered kind,

takamita—a bird with a hawk-like, spotted plumage,

tsumita—a white bird.

The feathers of the black and white species are used to decorate ritual spears and halberds. A close relationship between the black feathered species of Yonaguni and Botel Tobago and the wild black species of Southeast Asia seems probable—not only in view of the plumage, but also the diminutive size and anatomical features of the bird.

No special shelters are built for domestic fowl on Yonaguni. They roost on the higher branches of trees surrounding the residential compound and it is told, as a matter of considerable pride, that they do not fall off during raging storms. They lay their eggs in some designated spot within the compound.

According to the Koreans, chicken meat was not eaten on any of the islands with the exception of Okinawa. It is, incidentally, also not consumed on Botel Tobago. Poultry for ritual purposes seems to have been raised in Yonaguni from A.D. 1479. The Koreans are not very explicit about this and neither is the contemporary scene particularly revealing. Birds do, however, to this day play the role of representative for men in many rituals connected with death.

In the case of a shipwreck, white stones, representing the victim's spirit are picked up on the beach and placed in a miniature boat together with a chicken. This boat is then set afloat. This custom has an exact parallel in Misaki, Kanagawa prefecture 三崎, 神奈川縣 Japan. According to Utsumi Nobukichi (1960: 274) this practice is resorted to, if the corpse of a victim cannot be recovered. It is believed that the bird will cry out when it passes over the victim.

If somebody in Yonaguni has sustained serious injuries, a chicken is turned loose into the jungle to serve as substitute for the wounded person.

On Hateruma island (south of Yonaguni) a chicken is dressed in clothes and put in the grave in the case of a stillbirth, or if two members of the same household die within one year (Informant Aragusuku Yukichi).

The deputy function of the chicken is obvious.

Chicken blood plays in many areas an important function in the ritual (boat launching ceremony of Botel Tobago). Our material is in this respect insufficient.

(iii) *Pigs*. In A.D. 1479 horses, pigs and goats, common domestic animals in our days, were unknown in Yonaguni, but all of them were met with in Okinawa.

According to the Koreans there were not only no pigs in Yonaguni, but also no latrines, people relieving themselves in the fields. The connection between pig keeping and human defecation, apparent from the above report, takes at present in Yonaguni a form which is essentially identical with the general Ryūkyū style. It must have entered Yonaguni after A.D. 1479 and after the conquest by Nakazone and Kanaya.

At present, an obliquely fixed short tube, consisting of a wide, halved bamboo, projects from the trough end of the pigsty in the appropriate height and effectively disposes of human excrements.

Iba Fūyū (1939: 130) holds that pigs were introduced to the Ryūkyū Islands from Shantung province at the beginning of the Ming period. The 36 Fukienese families are also reported to have brought pigs with them.

Pig-breeding methods and associated customs of the Ryūkyūs are obviously closely related to those of South China. However, the names for pig are not related to Fukienese *t'ü*, but are of Indonesian origin.

	YONAGUNI	IRIOMOTE	ISHIGAKI	OKINAWA
Boar	<i>umuda</i>	<i>kamai</i>	<i>umuza</i>	<i>yamashishi</i>
domestic Pig	<i>wah</i>	<i>wua</i>	<i>wuo</i>	<i>'wa</i>

All words denoting the domestic pig belong to Indonesian *babui*, *baboi*. The *Woord-boek* of the *favorlangsche* Taal (1842: 468) lists *kavoulon* for 'wilt vercken' and *vavoy* for 'vercken'. Dried pork is known amongst the Formosan Chinese as *m'wa*, the determinant following the object to be determined, a usage corresponding to the Indonesian usage. This grammatical formation is very often encountered in Ryūkyū dialects.

The problem of the wild boar population of the Ryūkyūs was first taken up by Naora Nobuo (1945: 170). He bases his theory on that the diluvian Ryūkyūs were only inhabited by deer, whereas the situation completely changed with the arrival

of man on these islands. Deer were completely exterminated and pigs dominated the faunal scene. Naora's deduction is that the pigs in question were not genuine wild pigs but domesticated animals, accompanying man in his invasion and subsequently reverting to a secondary ferile state. The absence of pig bones in diluvial layers and their abundance in prehistoric shell-mounds seems uncontested. However, in the light of recent finds (see later chapter) deer appears to have survived after human occupation.

Pig bones found in the Iba 伊波 shell-mound (Okinawa) are obvious remains of human meals—that shell-mound is considered most ancient in date. From an anatomical point of view, both the recent domestic and the prehistoric wild species show affinities with the pig races of South China. Senba Teruhiko who studied the pig bones excavated by Kanaseki and Kokubu from Shimotabaru shell-mound (Hateruma) in 1954, holds that these animals must have been slightly bigger than the South Chinese type, the male animal approaching the size of the recent female of the domestic species in Japan.

Pigs must have entered the Ryūkyūs from several directions at different times, only early diffusion from Japan being unlikely. Why did the pig enter Yonaguni so late?

At the end of the 15th century pigs were bred only in Okinawa, but known elsewhere. The Koreans mention wild boars in the mountains of Iriomote. A certain Chen (quoted by Iba 1938: 131) who visited the Ryūkyūs in the 16th year Chiaching of the Ming period (A.D. 1537) tells the following slaughtering method: 'They do not use knives for slaughtering pigs, but hold the animals under water till they drown and then singe their bristle'.

Among the names given for the wild boar *yamashishi* is clearly of Japanese origin; we are unable to place the other names.

(iv) *Goats*. On Yonaguni goats are, irrespective of their race, called by the generic name of *tibida*. In Okinawa they are known as *phija*, in Ishigaki as *pipiza* and Iriomote as *piza*. This name is apparently of southern origin, see Ambonese *bibi*, *bibam* (Stresemann 1927: 168). We particularly noticed a small, three-coloured race (white-brown-black) which is also found in Botel Tobago, the Batanes and the Babuyan. Goats were unknown at the time of the Koreans (excepting Okinawa). The three-coloured race, while of southern origin, may have been diffused via Okinawa.

(v) *Horses*. Horses are, irrespective of the all important function they fulfil in our days, a late introduction. The horses are of a small race (withers height 109–122 cm.) which is considered to be related to the prehistoric horse of Japan and the horses of Southwest and South China (Szechuan, Hainan) (Hayashida and Yamauchi 1956). In Japan they only survive in the Tokara Pony, originating in the Tokara Archipelago, off south Kyūshū.

Dogs are extremely rarely seen in Yonaguni having once been exterminated, because of the damage they inflicted on grazing stock. Cats are also not very numerous which is surprising in view of the rampant rodent population.

d. *Annual festivities and sea festival*. Yonaguni has 12 places of public worship. The main shrine, which represents them all, is known as Tōyama (Ten mountains).

To arrive at this figure of ten, two adjoining *ugan* are counted as one and a newly erected one is ignored. In outer appearance the shrines vary greatly. Some are just roofed-in small quadrangular stone platforms in a sacred grove, others more elaborate structures. The central Tōyama shrine, situated within Sonai town, reminds one of a minor Japanese village shrine and boasts a big *torii*. A structure of medium elaboration is the Kubura Tundabari shrine; we describe it here in some detail as it is the focal point of the (i) *unjami* (sea-deity) festival.

The sacred enclosure contains a seat of coral stone (facing inland) on which the deities descend; a roofed-over, slightly elevated platform made of wooden boards, called *ugan-gamori*, which serves as assembly and prayer place for the functionaries; and two small menhirs, the one under a high tree and facing the sea is called *ameuri no bidzil*, rain-prayer stone. Round porcelain vessels (in some cases celadon), filled with fresh beach sand, serve as incense burners and stand in front of the sacred stones. The incense sticks are quadrangular and come from Formosa. At festival times a bonfire, facing the seat of the gods, is kept burning brightly.

A priestess (*subaka*), assisted in her duties by a male assistant (*tibidi*), is attached to every shrine. The 12 shrine *subaka* are presided by the *ubuka* of Tōyama shrine. Between the 12 *subaka* there are no differences of rank, for each shrine has its distinctive functions at which the officiating *subaka* presides during the ritual celebrations.

All 12 functionaries have to attend communal rites under the guidance of the *ubuka* on the following days: 1st and 15th day of every month (lunar calendar); the harvest festival in the sixth month; and on the day of the boar in the ninth month. On all these days each *subaka* offers the prayers, vows and thanks of her own shrine community at Tōyama shrine.

The first and fifteenth days of every month are also set apart for ancestor worship in many parts of China and Southeast Asia. The rites conducted during the harvest festivals are centered round the ancestors and clearly belong to the same context.

As said, every individual shrine celebrates a number of rituals besides the communal ones. The whole spiritual life of the islanders is centered on these shrines, or more correctly, on the ancestral deities enshrined there. Organized religions like Buddhism, Christianity or State Shintō are not represented in present-day Yonaguni, although a Buddhist priest is said to have lived and died there formerly. Some kind of slight and superficial Buddhist influence is seen in the form and arrangement of some families' house altars (dedicated to the ancestors). Japanese State Shintō which many Yonagunians got to know when serving in the Imperial Army, obviously influenced the lay-out and structure of Tōyama shrine.

All religious functionaries in Yonaguni are women, with the only exception of the performers of the (ii) *uchininai* (cattle-increasing) festival on the days of the rat and the ox in the second and eighth months of the lunar calendar. These male functionaries are known as *bidzil no nushi* (master of the prayer stone) and the office is hereditary in certain families. The communal *uchininai* takes place on the days of the rat, whereas the individual one is conducted on the days of the ox. Though no explanation is given as to why these rituals are performed by men, there is an obvious connection between the heredity of this function and the heredity of prayer stones in certain families.

Another fertility rite is the (iii) *uramachiri* (or *tamamachiri*) on the day of the bird in the 10th lunar month.

On the morning of this day, the ladies of all houses who possess heirlooms (Umata, Nuko, Sona, Anishika, Chimafuka, Tumura, Koshima, Kushika, Nabuka) assemble in the Umata residence, bringing their hereditary paraphernalia. The religious functionaries assemble at the Nabuka residence and perform the prescribed rites. After this they join the other ladies at the *ubuka* residence where the *tamahate*, a sacred dance is performed. The heads of the *ubuka* and the lady of the Anishika household are adorned with necklaces, made of beads and intermittent *magatama* (comma-shaped beads); a wooden comb stuck in their hair. They hold short lances in their hands. The *subuka* and the ladies representatives of the houses with heirlooms dance, waving the ritual paraphernalia and making a din by banging them together.

As our stay was not during the festival season of this interesting ritual, we were unable to see it, all the more as it is forbidden to produce the ritual paraphernalia at any other time.

(i) *Unjami festival*. The sea-deities festival, widely known as boat-racing festival, is not an ancient, traditional festival of Yonaguni, but it is the only one we can describe from personal observation.

This festival takes place in Kubura on the third and fourth days of the fifth lunar month (27–28 May). For this purpose Kubura village is divided ritually and topographically (by a deep harbour inlet) into northern and southern halves; the latter contains 148 houses and 22 dugout boats and the former 94 houses and 12 boats. Each half selects a representative rowing team. In recent years a third team has been formed from amongst the possessors of motor boats. The third team is contributed in alternating years by north and south.

Well ahead of the festival food supplies and drinks are prepared. The festival opens after midday of the 3rd. The boat, selected as the most promising, is brought to the house of the official in charge of the festival (for each group separately) where it is decorated with designs in white, light blue and red paint. The designs are supposed to be traditional, but we noticed considerable variation in their execution and in the explanation of their meanings which may be due to the different traditional backgrounds of the Kubura villagers. Wavy lines, suns, moons and an occasional star seem to be the favourite motives.

While the men are thus busy with their artistic pursuits, their womenfolk assemble with the long, five-coloured banners—representative of their group—in front of the team. Tossing their banners up and down, beating gongs, the women form a procession singing and dancing their way to an open square in front of Kubura Primary school. All the village women, able to walk, are asked to take part. But the women who participate, so to say ‘on duty’, because their husbands are crew members or otherwise connected with the festival, or because they themselves have some ritual function, have their heads bound with rice-straw, a strand of which also encloses their hips. The deities who brought the cereals to these islands are generally imagined to have their heads bound with rice-straw or vines and to be clad with leaves (Kishaba 1954: 36ff).

The three separate processions converge on the big square and much commotion with the tossing of banners, gong beating and dancing ensues. We observed some bottles were going round freely with the result of almost frenzied activity. The chief official in charge of the festival offered a prayer in the centre of the commotion and declared the festival open (Pl. VIa). His words were lost in the general din and the people surrounding us were too excited to explain what was said. There was a moment when a general brawl seemed unavoidable with the men cursing the women for not keeping a decorous silence for the ritual and the women too far gone in the festival mood to pay more than derisive attention. The opening ceremony finished, the three groups and their hangers-on dispersed amongst flag-tossing, gong beating and dancing.

The male officials also returned to the boats, purified them with spirits and offered salt and spirits at the bow. The crew members, owners of the boats and officials thereupon retire for a drinking bout.

The *subaka* of all local shrines, their male assistants and three village council members, representatives of the village groups retire to Tundabara *ugan* where they shut themselves in and spend the night in prayer.

The morning of the fourth starts in every home with an offering of red rice (nowadays coloured with beans, originally probably a rice species with a pinkish hue), salt and spirits at the ancestral altar. Next, the bow of the racing boat is once more purified with salt. After the sun has risen the boats are put to water by their spectacularly dressed crews. The boats are carried on the shoulders and the scene vividly recalls the boat-launching festival of Botel Tobago (Kano and Segawa 1956: 342ff).

The crews then go to the shrine where the functionaries have been praying and incessantly offering incense all through the night. The crew members assemble in front of the *ugan gamori* and are served sacred wine (*omiki*) by the *subaka* who also offer prayers for their success in the coming races. The women of each group arrive in procession, tossing the long five-coloured banners and crowding the sacred enclosure to capacity.

The boat races represent the main event of the day. The crews thrice row their boats out to a given point within the confines of the harbour (demarcated by coral reefs) and then, at a given sign, race shorewards.

It has been suggested that this shoreward race is a ceremonial reception of the ancestral deities who visit their descendants from the beyond the sea. In Kubura there is only circumstantial evidence for this interpretation, the *ameuri bidzil* facing the sea. There is also a ban on terrestrial ships leaving port on the following day, because the ancestral deities are returning to the Beyond. Another explanation heard was that a similar boat race was held in the Beyond on the following day.

The ritual chant of the *subaka* who invite the deities to descend (from the mountains or a celestial beyond), indicates the existence of a second concept. Both these conceptions—mountain deities and sea deities, Beyond across the sea and Beyond above—are found widely distributed in the Ryūkyūs. The clarification of their respective position in Yonaguni belief must be left to further research.

There are three races, during one of them, the *tempuku hāri*, the boats must be upset at a certain point. The ordeal character of the dragon-boat race of South

China—to which the Yonaguni race is closely related—has been pointed out by Eberhard (1952: 73, 76). The ritual demands a human sacrifice which is designated by the race. In South China the drowning of at least one man seemed to be an essential feature of the festival, but in Yonaguni this has taken a symbolic character.

The women belonging to each group show frenzied excitement once the boats are put to sea. Some of them enter the sea breast deep, uttering rhythmic shouts and accompanying them by imitations of the rowing movement executed very gracefully. Again their heads and hips are encircled by rice-straw and the stick with which the gong is beaten is bound with rice-straw and has a rice-straw padding (Pl. VI*b*).

Between the races the women also come ashore and entertain with dances and songs which again are imitative of rowing. One of the women sported a man's peaked cap and dark sun-glasses and had her face heavily painted. She had an oblong balloon fastened to her body in obvious imitation of a penis, performing a grotesque dance to the delight of the spectators. In former times a goat's bladder is said to have served the function of the balloon. This dance has clearly a fertility increasing meaning.

When the crews come ashore after each race, the last incoming crew gets a vociferous scolding and wounding taunts from their unsympathetic womenfolk. Crews, supporting women and spectators repair to the shrine where they pray and are prayed over by the *subaka* and served *omiki*. The anthropologists were at this occasion also treated to a sacred drink and wished a long and prosperous life.

To win the race seems to be of high importance as shown by the behaviour of the women, as well as by the back-breaking exertions of the crew and the great excitement prevailing amongst the spectators which, at frequent intervals, erupts into local brawls and quarrels. During the festival races we witnessed, one group was defeated twice running, the second time hardly daring to come ashore. They won the third race by dint of superhuman efforts, landing in a state of near-collapse with some members spitting blood.

After the last race a general pilgrimage is made to the shrine and thanks are offered.

The afternoon is passed with all kinds of entertainment, general feasting and merrymaking. On the following day we noticed quite a few black eyes and bruised heads amongst the festival guests from agricultural Sonai—testifying not only to the generally high spirits, but also to a latent animosity between the old established agricultural settlements Hinai and Sonai and the newly-founded fishing village of Kubura.

It has been suggested that the dragon-boat race was introduced to the Ryūkyūs by the 36 Fukienese families (A.D. 1392), but we believe it long preceded them.

In the Kubura festival the ornaments, colours of the crew's outfits (vermilion, bright yellow and turquoise), the five-coloured banners and the finials of the flagstaves (carved dragon's head with long protruding tongue) are indubitably South Chinese. Stübel (1952) thinks that the dragon-boat race is a cultural heritage of the Tai from the days when they still inhabited South China. Eberhard (1942: 46*off*) attributes it to the Yüeh, a culture which he says is the product of a mixture between Tai and Yao cultures about which we have documentary evidence from the middle of the first millenium B.C. The boat festival has a wide distribution in

Southeast Asia. To the north it has spread as far as the Pacific coast of Honshū, the coastal regions of Northwest Kyūshū and the coastal districts facing the Korean Channel.

Our opinion is that the *unjami* festival, which we witnessed in Kubura village, has many characteristics of a harvest festival; this was confirmed by verbal information about harvest festivals. Within the framework of the *unjami* festival the *subaka* prays in front of the *ameuri no bidzil* for an abundance of the five cereals. With events following each other at great speed, we were unable to record the prayer. The *unjami* festival is therefore to be considered as a kind of combined land and sea harvest festival, reflecting the local ecology, vascillating between agriculture and fishing.

Another point of interest is that the actual performers of the races are spiritually superseded by women who perform all the religious offices.

In other regions of the Ryūkyūs (Hiji, Tobaru, Kagamiike, Ukuma, etc.) we find examples of sea festivals completely assuming the character of harvest festivals. Boat races, tug-of-war or sham fights are invariably found as main events of these festivals. Eberhard (1952: 77) believes that sham fights or ceremonies on both banks of a river were the original form of the dragon-boat race.

e. Notes on material culture. On the personal appearance of the Yonaguni islanders at the close of the 15th century the Korean castaways reported as follows: 'Both sexes wear their hair long. Men gather their hair in the back, folded up double and held on the nape by a hemp cord. When too long to be dressed this way, it is wound round the head several times. Women's hair reaches in some cases to the ankles; even when short, it touches the knees. It is worn gathered into an off-centre topknot, the straggling hair at the back and the sides is swept up and fixed by a wooden comb. Both sexes have their earlobes perforated and wear dangling jade ornaments. Three or four rows of beads with intermittent *magatama* (comma-shaped beads) encircle their heads and necks. Only old people refrain from adorning themselves in this way. Clothes are dyed indigo. The islanders wear protective hats which resemble in shape the hats worn by Korean priests. They are made of mulberry leaves'.

Though fashions have changed many times since those days, we easily recognized from the Koreans' description the head-dress worn by the *subaka* and *ubuka* today in religious services. Yami women also wore the same head-dress. Wooden combs are handed down as heirlooms in certain Yonaguni families; that in the Koshima family is illustrated in the travel diary of Sasamori Gisuke (1894). In that sketch the comb is boat-shaped and calls immediately to mind the comb of Paiwan, East Formosa (see Chen and Tang 1958). It is decorated with borders of small upright and reversed triangles, variations (due to its material) of the saw-tooth motif which is commonly found on Dongson objects (Heine-Geldern 1951: 234).

In the contemporary neighbourhood of Yonaguni the motif is often seen on Paiwan woodcarvings and is one of the main ornamental patterns on the plank-built boats of Botel Tobago. The concentric circles forming the central part of the design further indicate Dongson stylistic influence. An absolutely identical ornament as the one decorating the Yonaguni comb is found on a Paiwan shield (Lin 1930: pl. 11).

During our survey in Hinai, we sought permission to see this comb, but after long deliberation it was refused, because heirlooms are not allowed to be taken out at any other than the specified times. As the lady of the house was ill, it was moreover feared that untimely exposure would aggravate her affliction.

The Koreans mention indigo dye, but they said nothing about weaving. At present the Southeast Asiatic horizontal loom with backstrap is used in Yonaguni, but very few women are still proficient in its use. As they are all of very old age, the handicraft within a few years will disappear.

Weaving with coloured threads is in recent times practised on this island and in the neighbourhood (Formosan aborigines) with much good taste. The techniques of dying in reserve (the local variety being known as *kasuri*) generally associated with the Southeast Asiatic loom—and a prominent feature of the recent textile art of the whole Ryūkyū archipelago—seemed to be unknown to Yonaguni at the close of the 15th century. The exclusive use of indigo dye, on the other hand, is one more parallel between 15th century Yonaguni and Botel Tobago, where until the end of World War II colours, other than indigo, were neither used, nor appreciated.

The ritual paraphernalia handed down as heirlooms in certain families is listed in the 'Yonaguni Island Record' (Ikema and Arazato 1957: 151) as follows:

- Umata family —precious stones, bow, spear, hand-drum (hour-glass type), bell.
- Nuko family —beads, abacus, weighing beams, comb, hand-drum.
- Sona family —sickle, hand-drum, lance, sword, three-pronged banner.
- Anishika family —three-pronged bamboo lance, three-pronged harpoon, halberd, *shamisen* (3-string instrument), beads.
- Chimafuka family —sword, sickle, wooden horse, three-pronged bamboo lance.
- Tumura family —bead, three-pronged bamboo lance, wooden horse.
- Koshima family —comb, lance, beads, mirror, bow, club, hand-drum.
- Kusoko family —sword.
- Nabuka family —weighing beam.

This paraphernalia is only taken out on the occasion of the *uramachiri* fertility rite, so we had no opportunity of seeing it.

It is of considerable culture historical interest. Weapons feature prominently on the list, testifying to a ritual preservation of weapons which have long been in disuse. Among them the ubiquitous lance is well represented. Many weapons are described as three-pronged, a characteristic of some weapons of the Formosan mountain tribes. Bow and club may be survivals of even older cultural strata. We saw a photograph of one of the ritual drums which was representative of the geometric art style; it resembled very much the ritual drum of the Oyamori family of Hateruma Island shown to Kanaseki and Kokubu in 1954 (Kanaseki 1955).

The beads and precious stones in the list seem to be in most cases the comma-shaped beads or *magatama*. Magatama were given to the priestesses of the outlying islands as tokens of authority by the Chūzan central government, in an attempt to control the religious life of the far-off dependencies. However, the Korean Chronicle shows that magatama were popular in Yonaguni before the arrival of the

central government forces. Prehistoric magatama are known in Japan, Korea and Formosa. In Japan their use as adornment for priestesses must go back at least to the Yayoi period.

As we had no chance of studying this ritual material, we forego further comment; but let us remark that bow, lance, hand-drum, bell, precious stone and mirror form the professional outfit of shamans. This we shall discuss in a later special paper.

The Koreans make no mention of bow, arrow and halberd in Yonaguni. They list a knife and a small kind of short lance which the natives are said never to let out of sight. This detail suggests another parallel with Botel Tobago. The Yami carry an iron spearhead inserted into a short wooden handle (20 cm.). They never part from it; they call it *takulus* and consider it a talisman against invisible enemies of the spirit world (*amitu*). If the 15th century Yonaguni islanders did carry indeed a similar weapon this would be a first indication of the spiritual life of Yonaguni.

f. Preliminary analysis of Yonaguni Culture. The material gathered in the field and in library research is far too little to allow us an ambitious analysis of past and present Yonaguni culture; we therefore limit ourselves to listing isolated culture elements, whose origin can be traced with reasonable certainty. Although the geographical affiliation of Yonaguni culture comes out well enough, its time-depth does not emerge very clearly.

We do not know when and whence Yonaguni was first settled. The present archæological finds and the local traditions suggest at one time a planting-stick agriculture and root-crops, supplemented by maritime food, prior to rice cultivation. Rice cultivation, in a technically early form, brought tremendous improvements. The southern origin of this rice cultivation seems certain. With it came cattle and most likely a megalithic wave. The area geographically and culturally nearest to Yonaguni is East-coast Formosa, but there is little doubt this cultural pattern originally spread from prehistoric South China.

This rice-cultivating culture, with the use of iron, was well established by the time of the Korean castaways (A.D. 1479). Women played a prominent role in religious and political matters. Religion was probably characterized by some form of ancestral worship with its relations to fire cult. The house plan was rectangular with a central fire-place. The beginnings of coarse pottery locally made, with Formosan affiliations, cannot be dated with any accuracy. The surprising absence of pig testifies to the island's isolation though some intercourse with the other islands in the archipelago took place.

Neglecting for a moment the introduction of pig breeding, Chinese porcelain, and in recent times the objects of modern civilization, Yonaguni culture does not appear to have changed in any radical way since the days of the Koreans. Rice cultivation after ancient methods, the same religious concepts, death ritual and the prominent role of women in religious matters characterize, to this day, Yonaguni culture.

Four geographical areas from which Yonaguni culture borrowed its essential features, or, at least shares them with, can be distinguished:

Formosa: (ultimate origin of cultural elements from prehistoric South China, not excluding via Southeast Asia, implied).

- (i) *Prehistoric Formosa*: *Panari* pottery and ancient Chinese pottery types, megalithic features (menhirs, sacred stones, stone altars, bone-washing ritual, etc.)
- (ii) *Tribal Formosa*: tooth expulsion, weaving, artistic styles, three-pronged weapons, urn-burial.
- (iii) *Sinized Formosa*: pig breeding, rice cultivation.

Botel Tobago: Digging-stick root cultivation, pottery types, urn-burial, indigo clothes, personal adornments, hair-styles, *takulus* (?), *anitu* belief (?), plank-built boats (?), three-coloured goat species, use of domestic fowl for ritual purposes, weapons.

Okinawa: (dispersal from island to island and ultimate origin from China [predominantly Yüan and Ming] implied) celadon, and other porcelains, pig-breeding and feeding with human defecation, turtle-backed tomb, iron (?), paper-money, incense, framed ornamental tablets with 'filial piety' inscriptions, etc.

Japan: Compulsory education, goods of modern civilization.

NOTE: We are not linguistically competent to evaluate the Yonaguni dialect; it urgently demands research.

From this incomplete list the predominantly South Chinese derivation and orientation of Yonaguni culture through the ages emerges. But the Yonaguni islanders now consider themselves, owing to the pre-war Japanese policy of assimilation, to be Japanese. Their desire and efforts to be recognized as such are quite pathetic.

II. IRIOMOTE 西表 ISLAND

1. *Topographical features*

Iriomote is a large island situated between Yonaguni and Ishigaki, but considerably nearer to the later (Fig. 1 a). Its circumference measures 77·018 km., its area 321·877 sq.km.

Its northeastern part was formed during the palæozoic age, the other areas mainly in the tertiary which also saw the formation of mountains like Komidake 古見岳, Gozadake and Dedoyama. The rivulets descending these mountains in all directions have created deep valleys of predominantly alluvial date. The east coast owes its existence to the upheaval of a coral shelf. Whereas the coastal and the river areas are characterized by small lowland belts, the southeast coast rises precipitiously from the sea and culminates in Haegishidake 南風岸岳.

Funds and time militated against any time-consuming projects. Nevertheless, Iriomote and especially in its less accessible areas, may be a most promising island from an archæological and ethnological point of view.

2. *Nakamagawa* 仲間川 *shell-mounds 1 and 2*

Both shell-mounds were excavated and the finds analysed by a research team of Waseda University, Tōkyō (Yaeyama 1960). Desirous to know at first hand these shell-mounds we spent the 1st and 2nd June 1960 in surveying the sites.

The sites are marked by big sign-posts, declaring the areas under protection of the Ryūkyū Government Cultural Property Commission and prohibiting all uncontrolled research. This left us no choice but to give up our plans.

Shell-mound No. 2 has been refilled completely and allows no comment to be made.

We saw a partially refilled trial trench (1.5 by 7 m.) dug into shell-mound No. 1 at a strategically unrewarding position. This mound is of considerable dimensions and the trial trench dug at its very edge can hardly be taken as representative of the whole mound.

We studied the collection of artifacts from shell-mound No. 1 which is in the possession of Nakama Primary School. The teacher in charge kindly gave permission to remove the artifacts to Ishigaki where we measured, photographed, sketched and compared them with objects from various local collectors (Professor Miyara Kentei, History Club of Ishigaki Middle School, Ishigaki Town Library). We were also allowed to make use of the Torii Ryūzo collection (now at the Anthropological Institute of Tōkyō University, in charge of Professor Yamanouchi Sugao). On the basis of these comparative studies and from a general, methodological point of view, we submit the following comments on the Waseda findings:

A typology of Yaeyama stone implements was established by Nishimura Masae, a member of the Waseda research team (Yaeyama 1960: 157–159). The basic prerequisite of a serviceable typology is a constant determinant; in this Nishimura's typology is found wanting. Implements with blades which are symmetrical on both sides of the medial axis (lateral section) are termed 'double bladed' (centre-edged), unsymmetrical ones 'single bladed'. Ambiguous terms like 'single-bladed', 'double-bladed' give rise to confusion and should not be used (viz. truly double-bladed tools, i.e. implements possessing two blades, f.i. Minoan Crete).

Nishimura's types I and II are thus 'single-bladed, blunt' and 'single-bladed, pointed', blunt and pointed referring to the blade. For type III a completely alien concept is introduced, since it is described as 'front (profile) slightly curved, back (profile) strongly curved'. Type IV again reverts to the first criterion and consists of 'double-bladed' implements. Some of the paradigmatic implements for types I, II, IV are untypical border cases and in some instances also qualify for inclusion with type III by virtue of their curved dorsal profile. This is counter-balanced by the fact that type III implements could be included under types I, II and IV.

Although Nishimura reiterates his conviction that the blade is the only suitable criterion for classification of stone implements (Yaeyama 1960: 159)—a principle, curiously enough not adhered to by himself—we fail to see its advantage over the cross-section criterion first established for Southeast Asia by Heine-Geldern (1932: 543ff) and subsequently employed by Beyer (1948) and Duff (1959).

In actual practice Nishimura's limitation to lateral sections, necessary to distinguish 'single-bladed' from 'double-bladed' implements, kept him from noticing

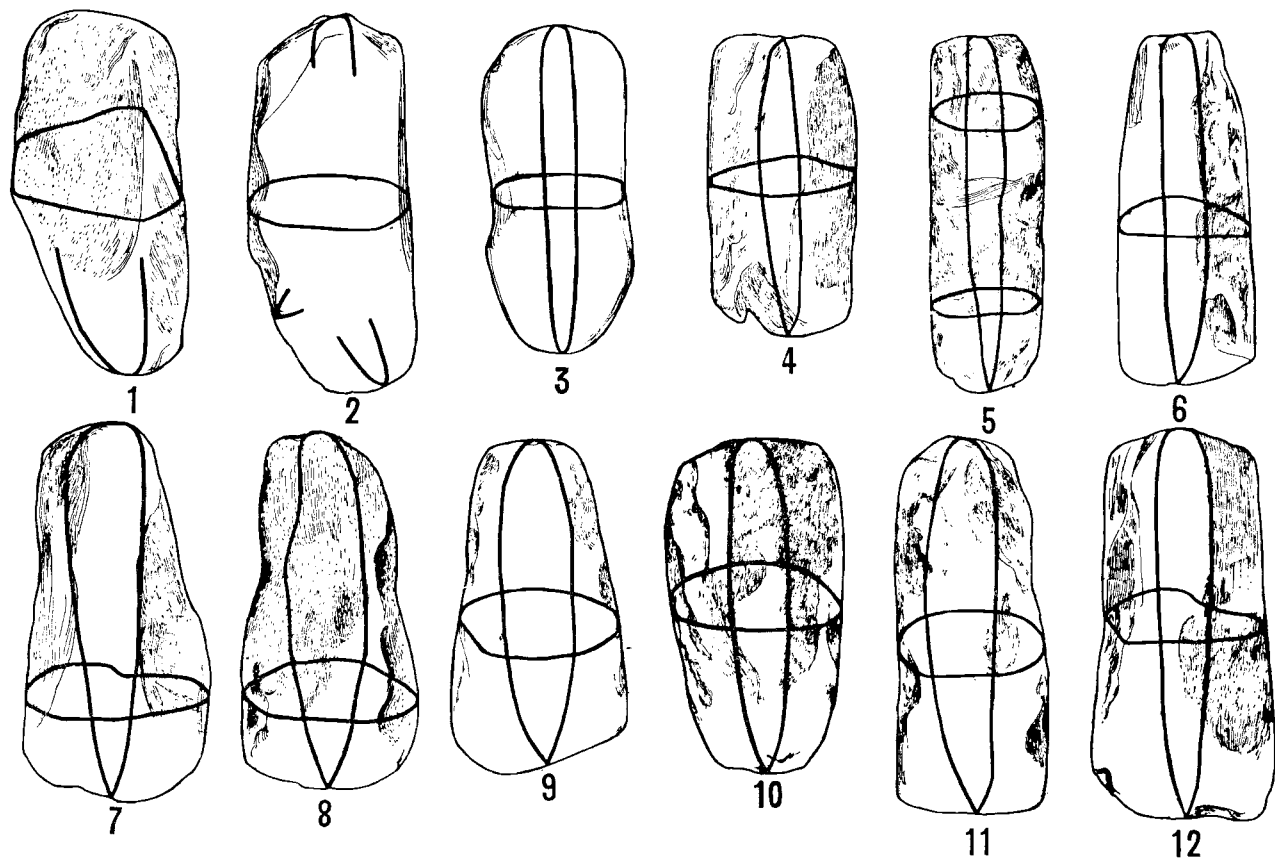


FIG. 5a. Stone implements from No. 1 Nakama shell-mound, Iriomote.

All the implements are of black or bluish-gray eruptive rock. (exact identification has not yet been possible).
[In the possession of Nakama Middle School.]

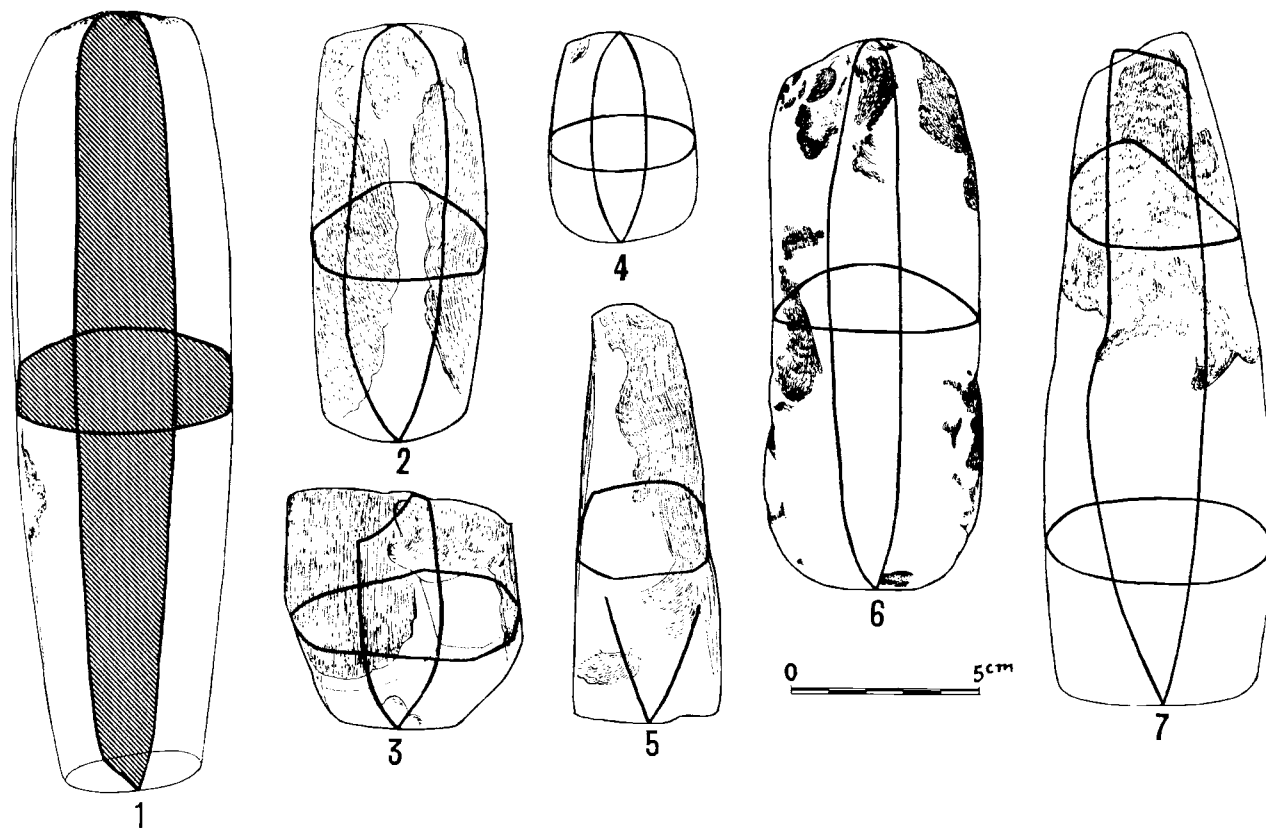


FIG. 5b. Stone implements from Iriomote 西表

1, 7. Stone implements found in Kitashima, Akahozaki; 2, 3. Exact location unknown, Iriomote; 4, 5, 6. Nakama, Iriomote.
 All the implements are of black or bluish-gray eruptive rock. [All items are in the Ishigaki Town Library.]

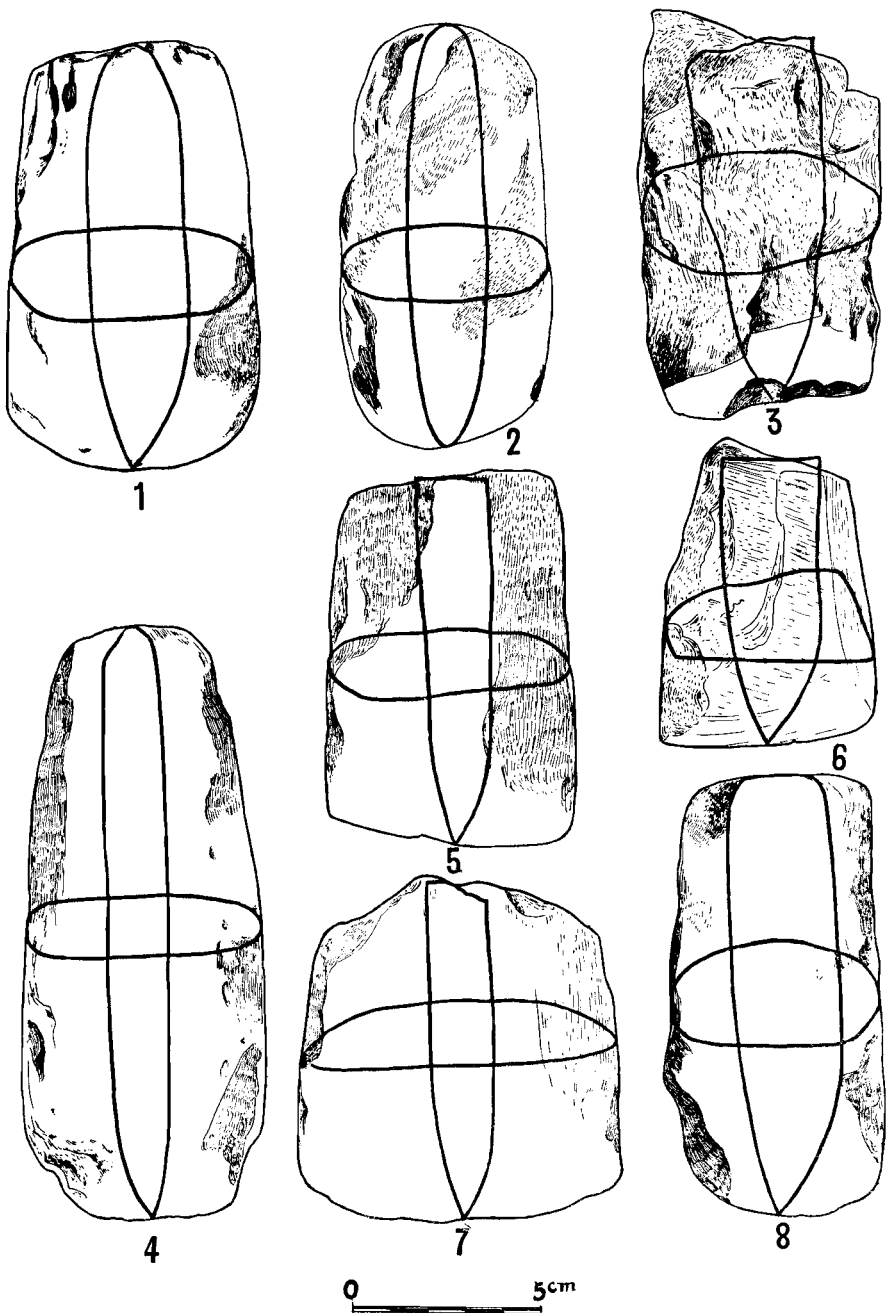


FIG. 6a. Stone implements from No. 1 Nakama shell-mound, Iriomote.

All implements are of black or bluish-gray eruptive rock. [In the possession of Nakama Middle School, Ishigaki Middle School and Mr Miyara Kentei.]

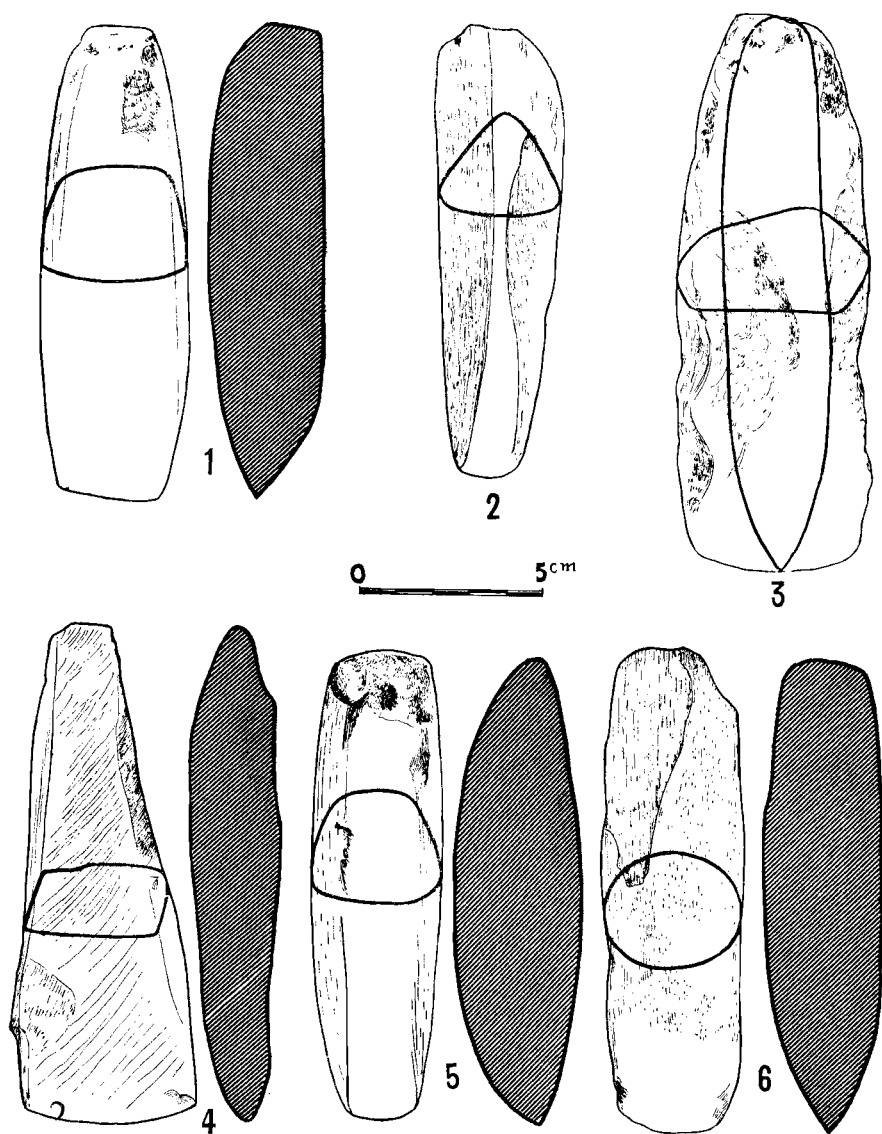


FIG. 6b. Stone implements from No. 1 Nakama shell-mound, Iriomote.

All implements are of black or bluish-gray eruptive rock. [In the possession of Nakama Middle School.]

some points of interest, although it need not have prevented him from seeing some butt modifications clearly emerging from his own sketches.

All the implements known to us from the Southern Ryūkyūs to date are examples of pre-quadrangular techniques, the unsuitable stone material accentuating their poor workmanship. Though irregular cross-sections make classification difficult, the three subtypes of the early Neolithic Walzenbeil, as established by Beyer (1948: 23) are represented. The most common section is elliptical, associated with centre-edged cutting edge (Figs. 5-6).

Another type of implement clearly emerging has a roughly trapezoidal cross-section. In some cases, the back of oval or transitional axe-adze types is reduced to a narrow ridge, resulting in a triangular cross-section. These can be remotely compared with similar sections in Malay beaked adzes, the pick-adze of Indonesia or the 'hog-backed' adze of Polynesia. This development would seem to have reached the southern Ryūkyūs as a sort of 'fashion' for plain-backed adze/axes in all stages of remodelling appear in the collections.

The attempt to produce a stepped butt can be found in association with irregular ellipsoidal cross-sections. The steps are not as well developed as in Luzon, South China and Formosa, but should represent an influence moving north from Formosa.

Stone implements other than axe/adzes are dice or ovoid shaped pebbles, with pits hollowed out on four or six surfaces which seem to be identical with the ovoid pebbles (shell-crushers) described from Formosa (Sung 1958; 120-22). Stones, sometimes of considerable size, used for stone-grinding, are frequently encountered.

In summary the South Ryūkyūan stone implements may be said to be early Neolithic plain, or modified. In their plain form they connect the Walzenbeil areas of Korea and Japan with Formosa and the Philippines. The modified specimens (back or butt) show clear affinities with the South. Late Neolithic implement types and stone-working techniques seem to have bypassed these islands completely.

The somewhat hypothetical functional aspect of the South Ryūkyūan stone implements has caused some controversies (Yaeyama 1960: 159). Nishimura rejects interpretation as hoes for the elongated implements with curved back. It is generally accepted that the elongated stone implements from Yüan-shan 圓山 (Formosa) are hoe blades. Nishimura illustrates a perfect parallel to the Yüan-shan 'hoe' from Kuroshima 黒島, but states that this type of tool is unknown from the Ryūkyūs. Stone implements of 'elongated shape and with a curved back' abound in Formosan prehistoric sites. Their function as agricultural tools can be affirmed with fair certainty, because they are also frequently found on the slopes of the millet cultivating areas of interior Formosa. The local villagers are not only thoroughly acquainted with their former use, but in some cases (Bunun) even know how to haft the blades.

In the light of these parallels with prehistoric and recent Formosa, an interpretation of the very similar Yaeyama implements as hoes does not seem unreasonable. Besides, the present-day Yaeyama hoe (locally called *bira*) has an iron blade of very similar shape to these stone blades. The opinion that the stone-blades were the proto-types of the iron-blades was first expressed by Kanaseki Takeo.

Some specimens of *shirenashijimi* (a corbicula species) from Nakama shell-mound No. 2 and Shimotabaru shell-mound (Hateruma 波照間 island) shown by Nishimura are of greatest interest. Their edges are chipped or ground and bear evidence of considerable wear and tear. A small number of these corbiculae with serrated edges was collected by Kokubu during the 1954 excavation of Shimotabaru shell-mound, undertaken jointly with Kanaseki Takeo. Nishimura interprets these artifacts in analogy with stone implements of the Japanese Jōmōn period as scrapers (Yaeyama 1960: 159). We think that these shells were used as reaping knives. Our trial trench at Yabuchi island off Katsuren Peninsula, Okinawa, yielded an undisputable specimen of such a reaping shell-knife.

3. *Miscellaneous ethnographic notes*

We noticed some small boats drawn up on the beach near Ohara 大原. At first glance they seem to conform to the constructional principle of the plank-built boats of Botel Tobago (ribs inserted after completion of the hull). Lack of time prevented us making a closer investigation or enquiry. The importance of this type of boat makes it an object of priority in future research. The old *sabani* (small boats) were all provided with *occuli*.

According to the Korean record of A.D. 1479 Yonaguni and Iriomote were at that time rice-producers. Nowadays people from neighbouring islands which do not lend themselves to rice production (Taketomi), own paddies on Iriomote to which they cross over by small boats whenever work is required.

The Koreans also report an interesting kind of adornment from Iriomote. They say that women have their noses pierced and a small plug of wood inserted, the resulting effect reminding one of moles.

III. ISHIGAKI ISLAND 石垣

1. *Topographical features*

The area of Ishigaki (Yaeyama) island which is the present administrative seat for the whole island group, is 258 sq.km. (Fig. 7).

The granite mountain Omotodake (510 metres) rises in the southwest, the north-east culminates in Nusoko-māhe and the northwest in Yarabudake 屋良部岳. The most important rivers are Nagurakawa, Arakawa, Miyaragawa and Todorokigawa.

We stayed on Ishigaki prior to embarkation for Yonaguni from the 9th–11th of May and on our return from 31st of May to 9th of June. Two days, however, were spent on Iriomote and a further two on Taketomi, the actual time in Ishigaki was 8 days. During that time we carried out the following projects: *a.* survey of the Akōbana cliff burial area; *b.* investigation of burial customs in Kabira 川平 village; *c.* survey of prehistoric sites within Ishigaki town, Yambaru, Miyara hamlet (near Nakano *ugan*), neighbourhood of Ubu *ugan* on the upper course of Miyara river, Shiramizubaru at the foot of Omotodake; *d.* investigation of a grave dolmen east of Ishigaki Primary School.

We also studied and sketched the prehistoric collections at the Ishigaki town library, and those in possession of the History Club and Mr Miyara Kentei (Figs. 8–9).

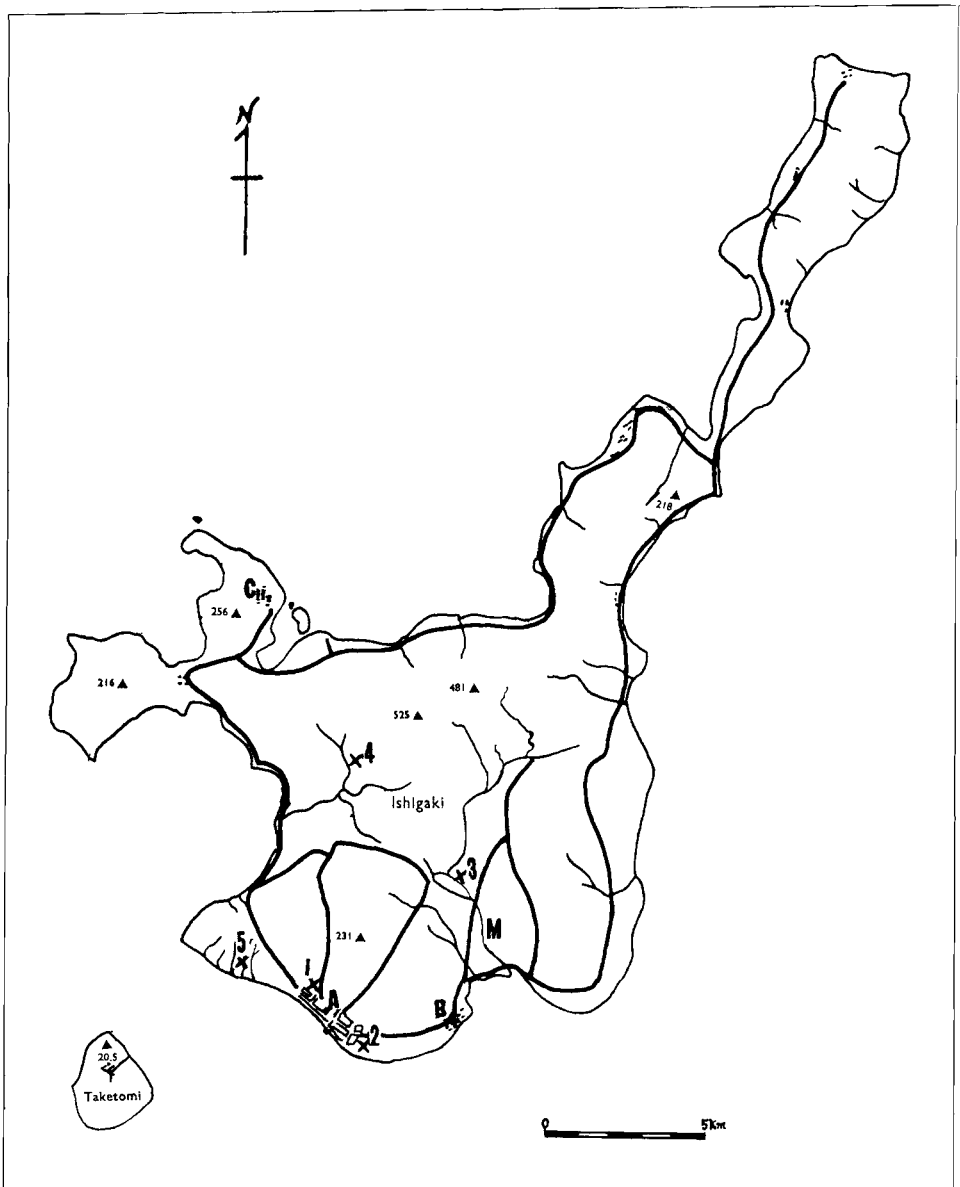


FIG. 7. Ishigaki 石垣 Island.

- A Ishigaki Town.
- B Miyara Village.
- C Kabira Village.
- M Miyara River.

- 1. Akōbana (cliff burials and shell-mounds).
- 2. Yambaru.
- 3. Kabarubira.
- 4. Shiramizu shell-mound.
- 5. Fusagu shell-mound.

2. *Archæology*

a. *Yambaru shell-mound, Ishigaki town.* The research team from Waseda University, mentioned above, excavated part of Yambaru shell-mound which is located on the city boundary of Ishigaki. A portion excavated and identified as 'dwelling site' was investigated by us. Neither study *in situ* nor perusal of the Waseda report (Yaeyama 1960: 131-132) have convinced us that the site in question really represents a dwelling site.

Dwelling sites were excavated in the process of the Amami Ōshima survey 1951 (Kokubu, Kawaguchi *et al.* 1959: 204, 240, see also Pls. II, III) at Ōshima island, Kasari village, Ushuku shell-mound and Okinoerabu island, Sumiyoshi shell-mound. They all show a regular quadrangular ground plan with the remains of a fire-place in the centre. This layout is identical with the recent house type (compound of living quarters with quadrangular house plan and adjoining quadrangular out-kitchen—*kamaya*), found in solid distribution from the Osumi and Satsuma peninsulæ of Kyūshū to the south of the Ryūkyūs and beyond. The question whether this form of house can be looked upon as continuous from prehistoric times—with important implications for the entire prehistory of the archipelago—could, in our opinion, be solved by extending the excavation areas at Ushuku and Sumiyoshi.

The Yambaru site not only lacks traces of a fire-place, but is completely irregular in outline thus suggesting natural upheaval of a coral shelf rather than human agency.

b. *Site near Ubu ugān, upper course of the Miyara river.* This site was discovered by Mr Miyara Kentei, but unfortunately completely destroyed in the process of sand quarrying during our stay at Yonaguni. Two stone implements found there appear in our illustrations (Fig. 8 b).

c. *Shell-mound near Miyara 宮良 hamlet.* It stretches between the coast in the south and the fields east of Miyara hamlet on the lower course of Miyara river. A fragment of a *tou* 豆 vessel (dish, or bowl on a high stand) was collected from under some coral stones near the south coast (Fig. 10). The collector, Mr Miyara Kentei, ventured the opinion that it may have been dug up when constructing an airstrip in war time. The fragment belongs to *panari* pottery tempered with crushed shells and may contain, judging by the gloss, steatite. A further characteristic is that the stem part of the vessel is solid and not hollow as is invariably the case with Japanese *tou* vessels. As far as ascertainable it is the first *tou* vessel found in Ryūkyūan ground. The *tou* is one of the most characteristic types of Lungshan pottery and survived into the historic period of China both in pottery and bronze. It remains open to speculation whether the Ryūkyū *tou* was fashioned after a pottery (Lungshan type pottery is known from prehistoric Formosa [Tsuboi 1953: 477]) or bronze prototype. *Ting* 鼎 type vessels translated into *panari*, are even nowadays frequently found as incense burners which was their function from time immemorial in their home country. The rest of the Miyara shell-mound inventory (*panari* and sherds of Chinese amber-coloured porcelain) suggests close relation with Yambaru. We collected a stone-axe from this site.

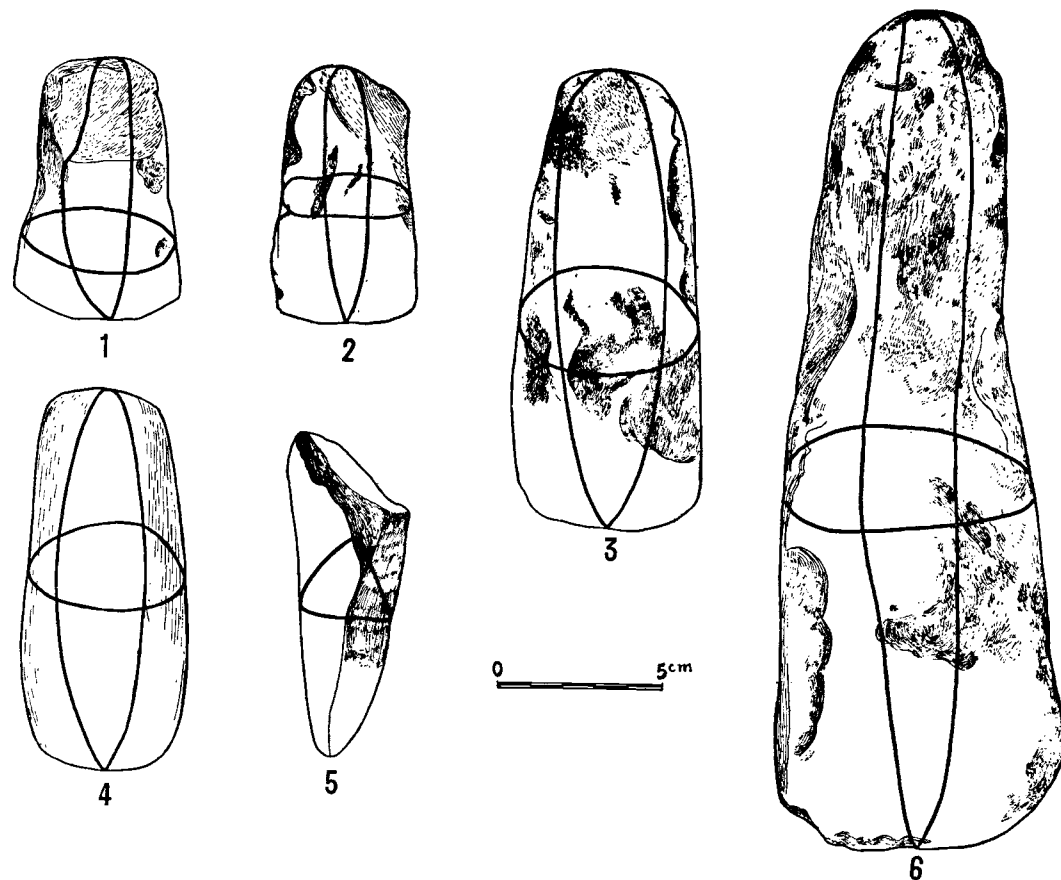


FIG. 8a. Stone implements from Ishigaki 石垣 Island and Kuroshima 黒島.

1, 2. Kabira; 3. Northcoast area (near Hori farm); 4. Ubu ugan (delta area of Nagura river); 5. Ohama Town; 6. Kuroshima. All implements are of black or bluish-gray eruptive rock.

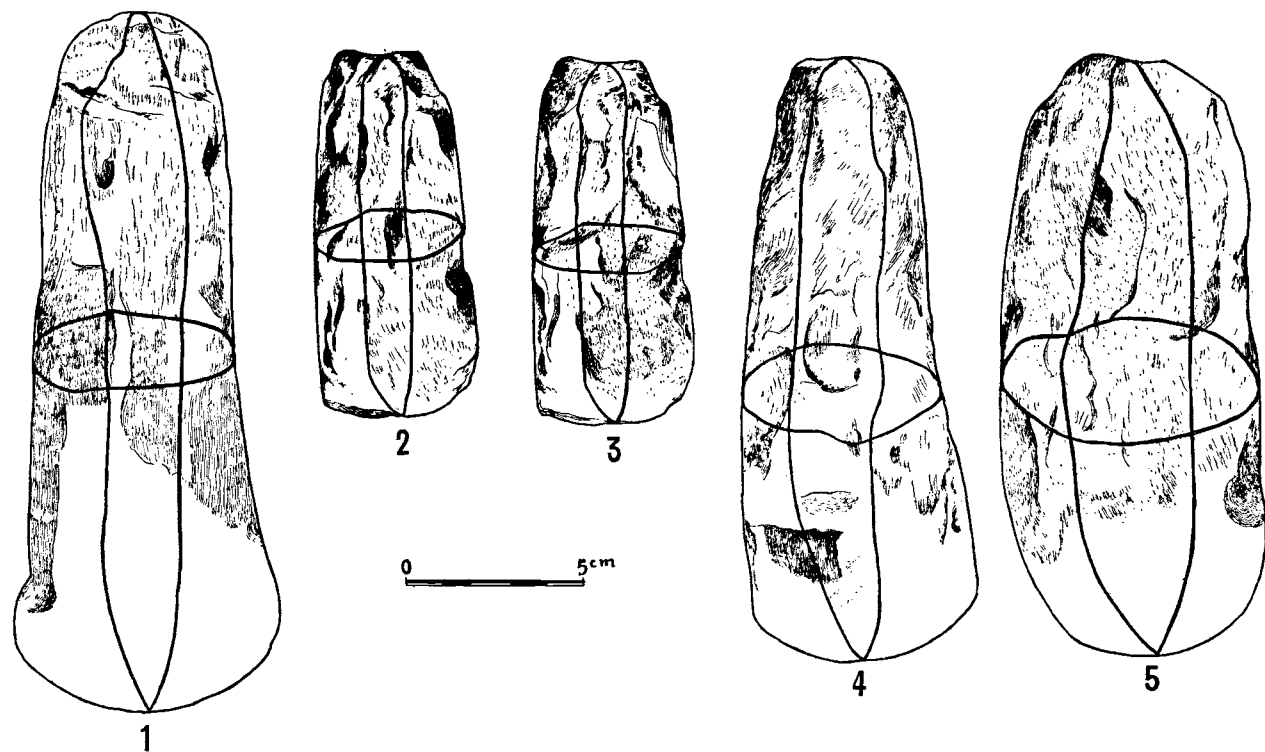


FIG. 8b. Stone implements from Ishigaki Island.

1-5. Stone implements from Kabarubira, upper course of Miyara river. All implements are of black or bluish-gray eruptive rock. [Collection of Mr Miyara Kentei.]

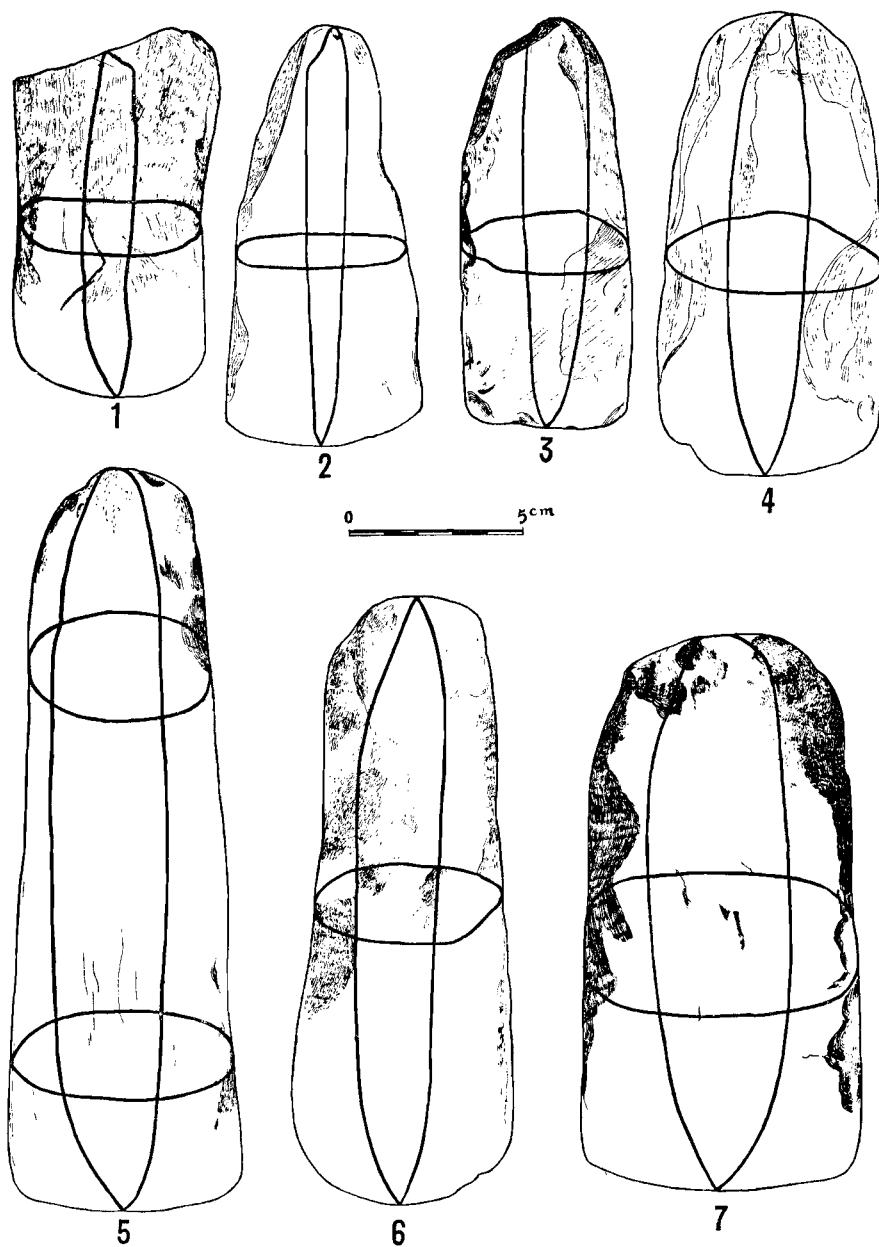


FIG. 9a. Stone implements from Ishigaki Island.

1. Ohama; 2, 4. Shinkawa Ward, Ishigaki Town; 3. Kabira; 5. Hirae Aerodrome, Ohama; 6. Maezato Ward, Ohama; 7. Northcoast near Hori farm.

All implements with exception of No. 2 (slate) are of black or bluish-gray eruptive rock. [In the possession of Ishigaki Town Library.]

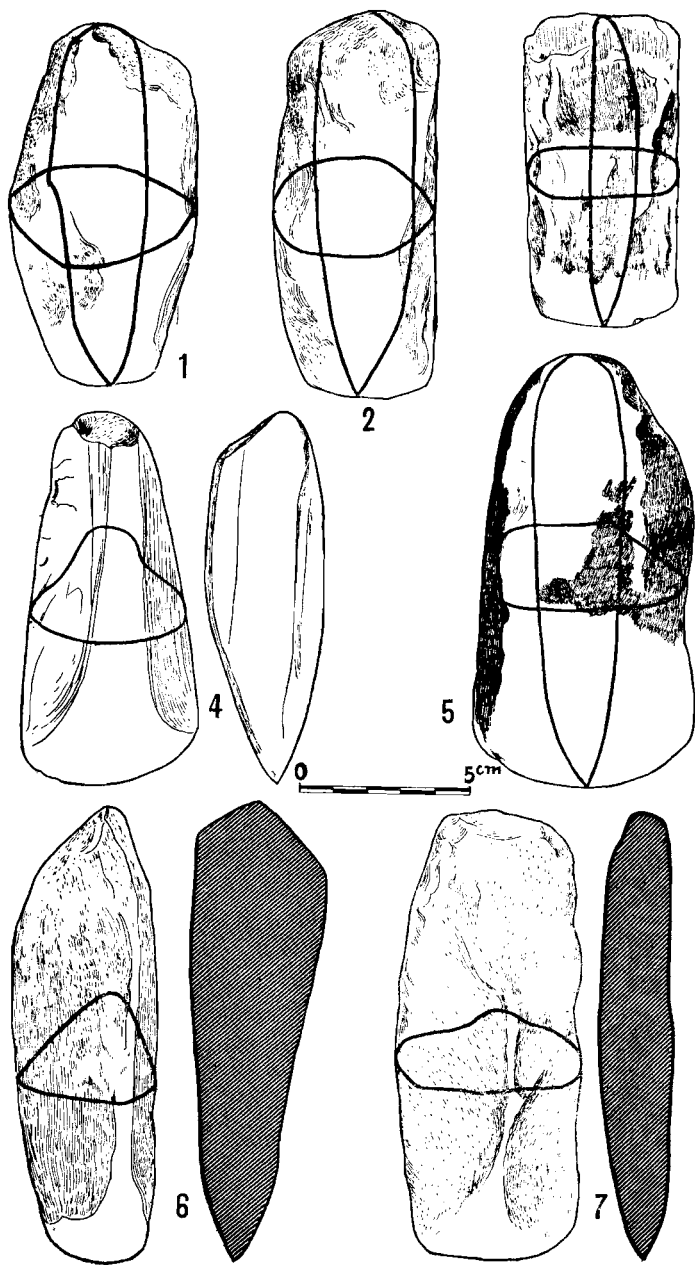


FIG. 9b. Stone implements from Ishigaki Island.

1, 3, 5-7. Implements made of black or bluish-gray eruptive rock, exact location unknown; 4. Implements made of giant clam. [In possession of Ishigaki Town Library.]

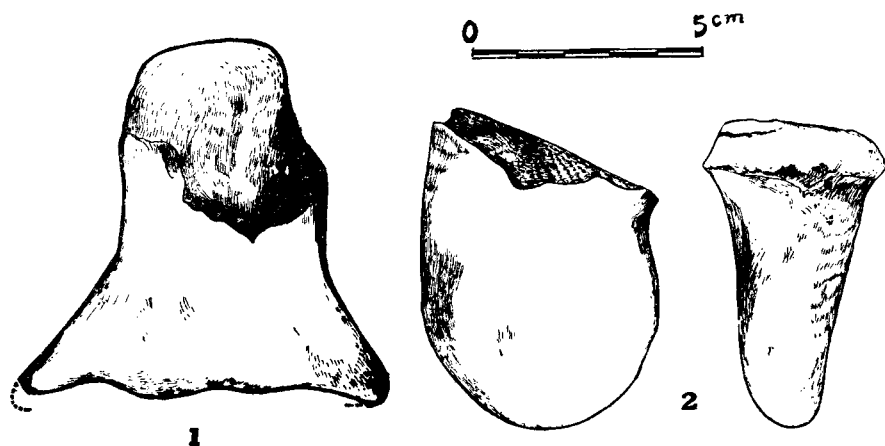


Fig. 10. Pottery from the river-mouth area near Miyara.

1. Leg part of Tou vessel.

2. Leg part of Ting vessels.

d. *Shimizubara shell-mound*. Its existence at the southwest foot of Omoto-dake was pointed out to us by Mr Nagama Masakichi. A shell deposit of roughly 35 cm. thickness is found under a layer of black earth, the latter measuring about 75 cm. The coexistence of *panari* with celadon and other porcelain varieties places the site in the same cultural and chronological context as Yambaru and Miyara.

e. *Nagura Bay* 名藏灣 *shell-mound*. Proceeding along the road from Nagura to Nagura Bay we noticed a great number of shells scattered over the surface of the fields accompanying the road on both sides. *Panari* and porcelain sherds were found in association.

In view of the identical inventory characterizing these numerous shell-mounds, dating of the culture which they represent should be attempted; this can be done on the basis of Chinese porcelain. Nakamura Keiji, a member of the Waseda research team has identified the Chinese porcelain as late Yüan (A.D. 1279-1368) and Ming (A.D. 1368-1644), an opinion we endorse, adding the proviso that import into the Ryūkyūs could not have started much before early Ming. For the main island of Okinawa this was a period of revolutionary innovations. Iron and porcelain spread rapidly from the coastal areas along the river courses to the interior. By and by the new goods also reached the outlying areas where they may have helped the sudden rise to power of local lords like Oyake Akahachi of Yaeyama. The Koreans report to have seen a smithy in Yonaguni (as early as A.D. 1479). Iron was probably acquired in small quantities from Miyako where the official Chūzan vessels called on route to Fukien. But even when these treasures finally came within the reach of everybody, indigenous materials, like stone and *panari*, continued in everyday use until comparatively recent times as clearly proved by all sites.

f. *Akōbana Cliff shelter burials*. A cliff site behind Ishigaki middle school is known as Akōbana. Shallow, natural ledges in this cliff are used as ossuaries and in some cases have an artificial platform at the back of the cavity. *Panari* jars with wide mouths containing human long bones and crania can be found there in profusion.

The jars are perforated either in the bottom, or in the side. Human remains are however, not confined to bone-jars, but in some cases strewn over the whole surface of the cavity, accompanied by bronze hairpins and pipe mouth-pieces of bronze. Besides these bronze objects met in Akōbana, we saw some in local collections. Bronze hairpins, in the Ryūkyūs formerly an official sign of rank, seem comparatively rare; but the same form, in brass (for the lowest classes), is very frequent. Similar bronze hairpins (star-heads) are found amongst the bronze grave-furniture of graves on the west coast of Formosa which have been dated to the early Ming period. Exact imitation of the pipe mouth-pieces, in bronze, are found in clay. Our information about bronze in the Ryūkyūs is exceedingly fragmentary and demands future investigation.

The human remains of these sites leave no doubt that they were all subjected to ritual bone-washing and represent the second (bones being collected into a bone-jar after ritual bone-washing), or the third stages (individual bones being emptied from the jars unto a general lineage ossuary) of the multiple disposal method practised in these islands to this day. The excavation of one of these sites must be undertaken, but we were prevented from doing so during our survey by the presence of a *habu* (poisonous snake).

We also noted a series of small shell-mounds all along the cliff. No doubt they represent the remains of the ritual meals partaken of in communion with the ancestral spirits at the time of various festivals, testifying to a remarkable continuity of this custom.

g. *The grave-dolmen of Ishigaki.* A few minutes' walk due east of Ishigaki primary school a modern concrete vault over a grave is to be found. It belongs to the Ohama family of Ishigaki, the present head of which Mr Ohama Eiho, is the 16th genealogically recorded head. According to Mr Ohama, in the stone chamber under the vault rests one of his female ancestors, 13 generations removed from him; she is said to have been a powerful spirit-medium. According to local tradition which places the event in the middle of the 17th century, she disappeared from view when she felt death approaching.

The grave dolmen termed 'stone-cist' by them was investigated by the members of the Waseda research team who were fortunate enough to be there when it was under repair. The stone slabs forming the chamber were measured by a team under Takiguchi Hiroshi who further reports that all crevices were tightly packed with small coral stones. The whole dolmen was also covered and surrounded with coral stones (Yaeyama 1960: 170). Although the fragmentary human remains contained in the cist did not allow for a reliable reconstruction, that only one body was buried there seems certain.

When we visited the tomb the concrete vault had already been completed and one side of the chamber had been concreted.

The owner kindly permitted us to open the vault and measure the chamber and cover. Mr Ohama stated that the first generation spirit medium of his family had been laid to rest in a similar tomb which, however, fell into disrepair and no longer exists.

Takiguchi's team reports to have seen stone-cists between Komi 古見 and Ohara 大原 on Iriomote island (Yaeyama 1960: 170). Stone-cists, three of them reputedly

made during the middle of the 16th century, are furthermore mentioned among grave structures of Miyako island (Inamura 1959).

On this subject Takiguchi (Yaeyama 1960: 172) says: 'It will be difficult to point out parallels, but it may be assumed that the stone-cists reached the South Ryūkyūs through contact with Japan, although this custom was no longer practised there at the time of contact'. The dynamics of culture change do not allow the adoption of a trait from an area where it does no longer exist, despite Takiguchi's statement.

Contemporary parallels—if it is this that Takiguchi intends to say—are difficult to find only when one's field of comparison is limited to Japan exclusively; this deplorable tendency characterizes the whole Waseda report. Wang Hung-po 王鴻博 (Wang, private communication; also Kanaseki and Kokubu 1953: 80) points out that stone-cists are still in use at present amongst some Bunun of the interior of Formosa, and much has been written about the prehistoric stone-cists of China, Korea, Japan and Southeast Asia. Heine-Geldern (1945: 150ff) has repeatedly said that the stone-cists of Southeast Asia were introduced in the course of the second megalithic wave which reached Southeast Asia during Dongson and early iron-age times. The original centre of diffusion of stone-cist and chamber graves is most likely China.

We have no detailed reports about the stone-cists of Iriomote and Miyako; we do not even know whether they contained human remains. (A detailed report on the megalithic tomb structures in the Ryūkyūs and a classification thereof are to follow as 'Ryūkyū Report 1962' in a later volume.) What is, however, certain is that the grave-dolmen of Ishigaki was the grave of a spirit-medium. The medium is laid to rest in a tomb different from that of the common people, and she is exempted from ritual bone-washing. According to local belief a spirit-medium goes body and soul straight to heaven after her death. Mr Ohama testified his surprise when human remains were found, instead of the tomb being empty, as he had been led to believe.

In view of this belief this tomb has the sole function of a cenotaph to the dead. The stone-monument erected in eternal commemoration of the dead is a preeminent megalithic concept; it can be observed, in the past and present widely distributed Japanese 'two-tomb' system (Hori 1958: 217–230). The grave containing a person's remains (*umebaka*, *ikibaka*, etc. = burial grave) is supplemented by a second grave (*mairibaka*, etc. = visiting grave); there the dead man is everlastingly remembered and the actual location of his remains is soon forgotten.

We tend to think that the multiple and pseudo-multiple disposal methods (in Japan the second grave contains at present only in rare cases the deceased's bones) originated from the concept that a person can only aspire to eternal life with the dissolution of his identity as a distinct physical being, according to prescribed rules (bone-washing). Hori (1958: 222) suggests that disgust with the decomposing body and the fear of physical and spiritual pollution made for the two-grave system of the Japanese. This seems contradicted not only by the fact that in some districts the body is buried in the best field of the family, but also by the general spiritual concept.

We consider it extremely unlikely that special burial methods accorded to religious functionaries (Ishigaki grave-dolmen) should either be limited to these islands, or have originated there. In support of this we submit the following evidence: A burial

site at Hirota 廣田, Tanegashima 種子島 was excavated consecutively from 1954 to 1956, (Kokubu and Morizono 1958). It was dated as middle to late Yayoi and contains single and multiple disposals on the same horizon. The remains subjected to bone-washing were subsequently covered with coral-stone mounds. There was one burial where the skeletal remains were contained in a box-shaped coffin made of stone slabs.

Among the single disposals, female skeletons with elaborate ornaments including carved shell tablets (*tao-t'ie* 蟹螯 pattern) dragon-shaped shell pendants, were excavated. Undoubtedly the women accorded such a special burial were of exalted social status, and probably priestesses.

Parallels between Yayoi-time Tanegashima and recent Ishigaki are not limited to the coffins surrounded with coral-stone mounds, but include single disposal for a number of female persons, within a society practising multiple disposal. If our suggested relation between Tanegashima and Ishigaki, which does not need to be a genetic one, proves correct, the belief and customs in question are of remarkable continuity in this general area because even now a priestess is not subjected to ritual bone-washing.

IV. TAKETOMI 竹富 ISLAND

1. *Topographical features*

Taketomi, due southeast of Ishigaki, is a small, low island only 8 km. in circumference; and surrounded by coral reefs. It is locally known as 'Dakidun'.

We spent the 4th and 5th June on the island. The road from the landing stage to the village leads through an area called Omasubaru. Shell deposits mixed with *panari* sherds can be seen in abundance, but we had no time to do any research. We had come to Taketomi to investigate a collection of archæological and ethnographic objects which were in the possession of the Rev. Uesedo Tōru.

2. *Archæological collection*

The Uesedo collection contains objects from the areas Omasubaru, Kannbaru, Otomi and Saboarū (Fig. 11a).

An artifact, which was said to have been picked up on the site of an abandoned house at Saboarū, is a pointed egg-shaped pellet of light red polished coral-stone (Fig 11a, 7). It measures in diameter 3.2 cm., longitudinal axis 5.9 cm. While we were sketching the object, Mr Uesedo, who appears to be in his sixties, said that stone-throwing was a favourite pastime in his boyhood. His own elders told him that in former times stone-throwing was not a sport, but done in fighting, and the pellets were known as 'fighting-stones'. Mr Uesedo then demonstrated the technique of throwing; a strong cord is knotted round the pellet, and its free end held between thumb and forefinger. This contraption is whirled round the head in the way of hammer-throwing. The pellet is released at the right velocity and the correct angle; the cord remains in the thrower's hand for further use. Slings are amongst the most widely distributed weapons. In Indonesia stone-throwing with or without the use of a sling is done in fighting (Heine-Geldern 1923: 878). Admiral Porter gives a similar report on Micronesia, Melanesia, Polynesia; in fighting the Marquesans, he says, that their stone barrage was almost as accurate as musketry

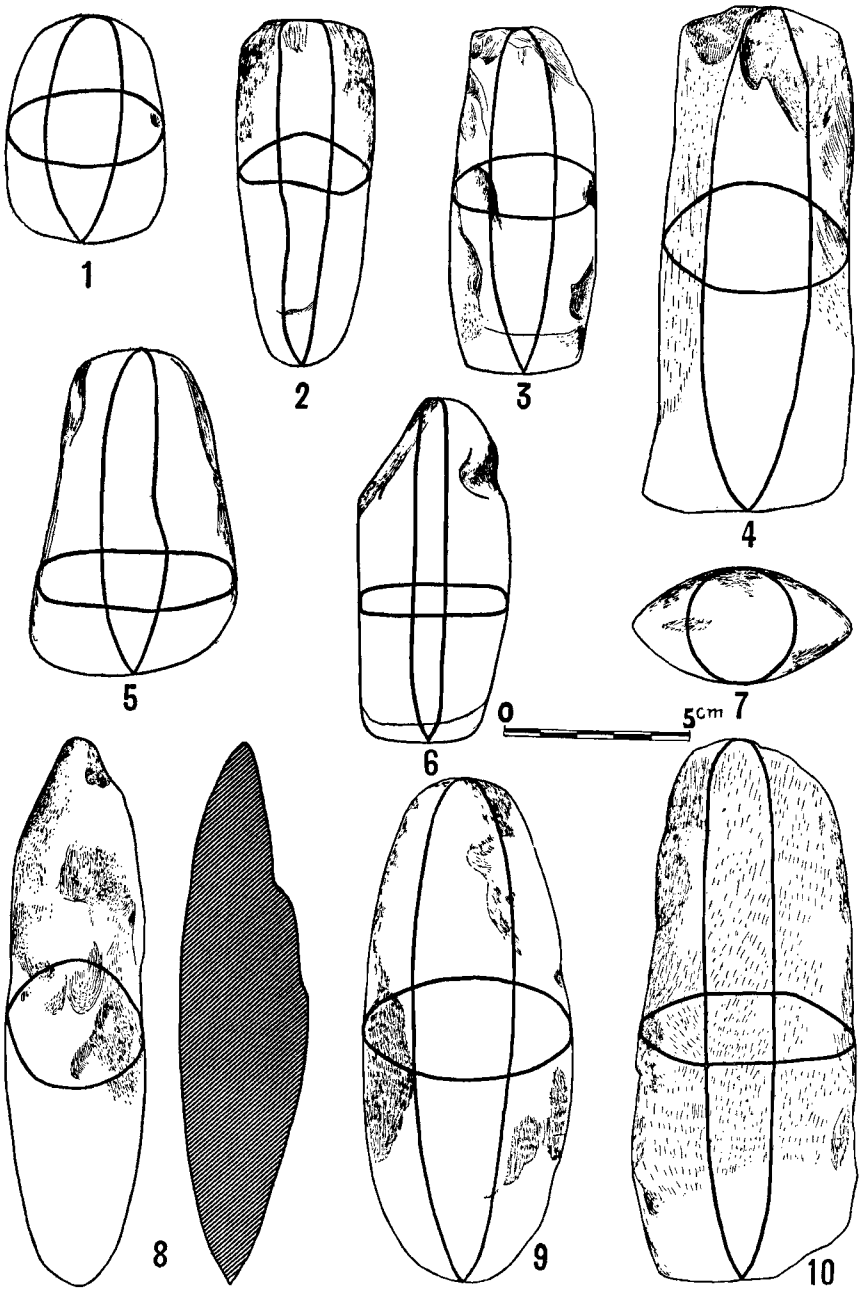


Fig. 11a. Implements from Taketomi 竹富 Island.

1. Stone implement, Higashi Omasubaru; 2, 6. Stone implements, Higashi Omasubaru; 5. Stone implement, Maemori family lands; 7. Sling-pellet made of coral; 9. Stone implement, Misakibaru; 10. Stone implement, near the Ueki family well; 3-4. Stone implements, exact location unknown; 7-8. [In possession of Mr Uesedo Tōru.]

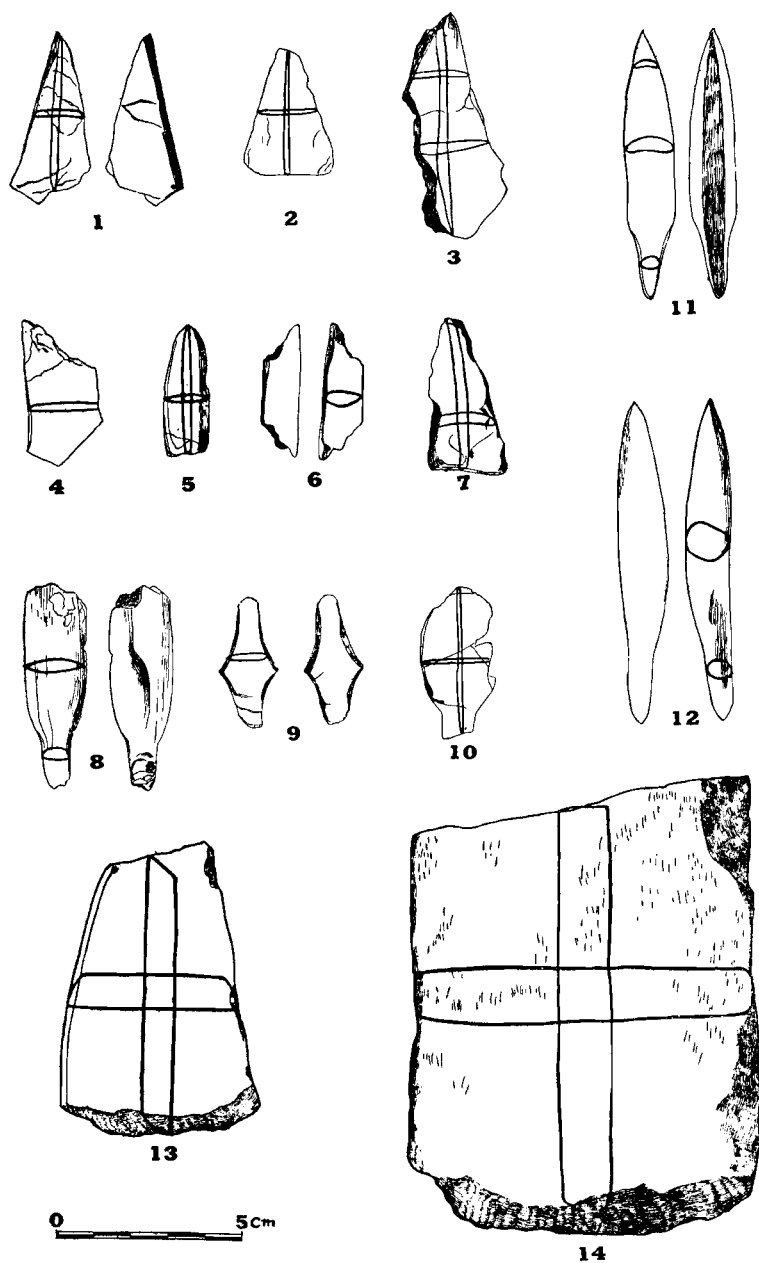


FIG. 11b. Artifacts from Yabuchi 藪地 Cave and Kadena 嘉手納.

A: 1-5, 7-10. Shell arrow-points from the lower layer of Yabuchi; B: 6. Bone arrow-point from lower layer Yabuchi; 11-12. Bone arrow-points, Kadena. 13-14. Stone implements, Yabuchi. See Fig. 13.

fire (Linton 1956: 78). Pellets of identical shape with our Taketomi pellet are reported from the Carolines and Marianas (Krieger 1943: 27). From prehistoric Japan so far only one instance has been reported (Yawata 1949: 129-30). However, clay pellets of identical form were recovered from several Yayoi sites in Kyūshū (Iizuka 飲塚 town, Tateike 立池 town, Takabuki, etc).

3. *Ethnographic collection*

Although all of Mr Uesedo's objects are of interest to the ethnologist, we single out a wooden crocodile or lizard, sculptured in the round, for it is a good example of the monumental-symbolic art style of Southeast Asia (Heine-Geldern 1937: 178) as otherwise seen in the artistic products of the mountain tribes of Assam and Luzon, or some objects of the Paiwan of Formosa. On the function of the object we were told that it was the upper part of a sign of rank carried in front of a dignitary setting out on a journey and it ensured clement weather. Three kinds of insignia of rank were apparently known. The crocodile sign was carried in front of an official dispatched from the royal court at Shuri 首里 (Shuri-ū-yaku); a fish sign (not sculptured in the round) denoted an official of the local government of Yaeyama. The local peasants carried a mulberry branch, whenever they had to go on journey and the propitiation of the winds arose.

In the Yaeyama archipelago Taketomi is one of the smallest, but it was once the seat of the local administration, which explains why local officials and dignitaries from the Central government called there. The insignia of rank were probably introduced from the royal court at Naha; they are obvious imitations of the Chinese official insignia. But the crocodile as talisman against adverse weather and its artistic treatment appear to be considerably earlier in Taketomi than its use as sign of rank.

V. OKINAWA AND YABUCHI ISLANDS

We returned from the Yaeyama archipelago and arrived in Naha on the 9th June, staying in Okinawa until 18th June. During this time we studied the collections of Shuri National Museum, investigated a cave site at Uji, Chinnen village, and dug a trial pit on Yabuchi island, off Katsuren peninsula (Fig. 12).

1. *Uji Cave site*

Chinnen village is on the Pacific side of southern Okinawa. The coral ridge, at the back of the village, is full of natural caves. The entire floor space of some of these caves is occasionally strewn with marine shells. One cave has been excavated a number of times since the end of the war; amongst the more important finds were deer bones. We regretfully confirm that it has indeed been ploughed up in a most conscientious, if not scientific manner; moreover, no records of these excavations were made.

At present the Uji cave floor is a red soil layer, intermingled with *shakogai*, (shells). These are no artifacts, but the left-overs of human consumption. Tawada Shinjun 多和田眞淳, a member of the Ryūkyū Cultural Property Commission and a

participant in the excavations gave the following stratigraphic account: the uppermost layer contained Iba pottery which to date is considered the oldest Okinawan pottery: blackish-brown, low-fired flat-bottomed pottery with incised basket pattern decoration limited to the upper third of the body. The next layer was a deposit of ash, and a third layer contained the deer bones. The material was sent to Shuri Government Museum; we found it as delivered from site with earth still adhering to it. The red soil turned out to be powdered coral. A tiny fragment of pottery contained in it, may have been Iba pottery from the uppermost layer, mixed up with the deer bones by careless handling. Compared with the contents of other Okinawan fossil beds, these deer bones are light and brittle, but slightly heavier than the animal bones contained in shell-mounds along the coast or in terraced sites. The additional weight may be due to calcification in the coral-stone cave.

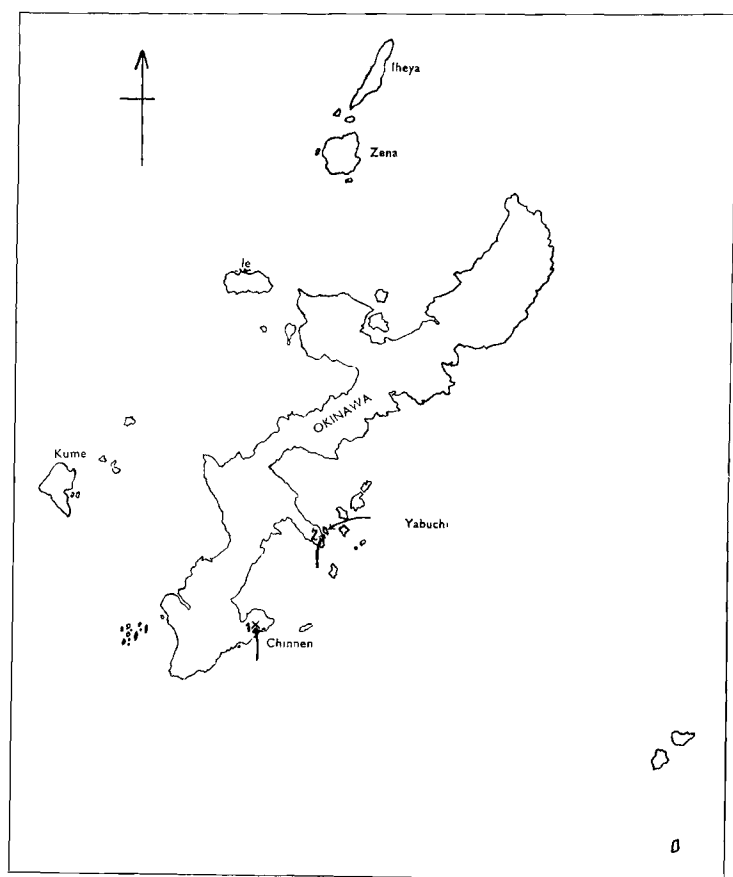


FIG. 12. Okinawa and adjacent islands.

We borrowed some of this bone material from Shuri Government Museum and submitted it to the Anatomy Department of the Domestic Animal Research Centre at Kagoshima University and to Kyūshū University, Fukuoka, for examination.

The bones were identified and confirmed as deer by both Professors Hayashida Shigeyuki of Kagoshima and Senba Teruhiko of Fukuoka (Pl. VI).

The presence of deer bones poses some important problems. If they are not a natural deposit, but left there by human agency, as suggested by their appearance, they have considerable importance in view of their alluvial context and the superimposed ash and red soil layer containing cultural deposits. Unfortunately the width of the three layers is unrecorded and other data unknown (presence or absence of intermittent sterile layers), so that we are left to wonder whether the site could possibly represent a Ryūkyūan Palæolithic. The currently accepted theory that all deer species were exterminated immediately after human occupation of the islands is due for revision in the light of Tokunaga's find of worked deer bones on Ieshima 伊江島 (Tokunaga 1938).

To establish the existence of a Ryūkyū Palæolithic beyond doubt, and determine its character, we consider that the excavation of cave sites, similarly situated as Uji, is a very promising priority project. But our chances will be irretrievably lost, if the wholesale destruction of essential evidence by amateurs is not stopped at the earliest possible moment.

2. *Yabuchi* 轍地 Island

There is a big cave on the small island Yabuchi, off Katsuren peninsula on the eastern coast of Okinawa; it is 4.3 m. deep and its cave entrance 19 m. wide. A teacher of Goza middle school drew Kokubu's attention to this cave and that prehistoric pottery had been found there; he also assisted us in excavating the trial pit. Only one day could be spared for this site, but the find material is so rewarding that its careful investigation is urgently recommended. The trial pit measured 1 m. by 2 m. and reached down to the mother rock. The cave shelters a small shrine, its floor is covered with efflorescent coral; this artificial layer is 10 cm. deep (Fig. 13). Beneath it is a culture-containing layer of 30 cm. of blackish earth and a second artificial floor of small coral stones. The next layer is dark brown, 30 cm. deep and almost sterile. At a depth of 25 cm. an ash deposit of 38 cm. diameter was discovered. Under this the dark brown layer continues for another 30 cm. and contains cultural remains. Directly under it we struck rock bottom.

It must be noted that the upper and lower culture-containing horizons clearly represent different cultures, and thereby give a rare time-depth value to the site.

The culture of the upper layer is characterized by a dark red-brown coarse pottery with sand or crushed shell-admixture, badly fired and very reminiscent of the South Ryūkyūan *panari*. Most fragments are undecorated, but specimens with roughly made incisions of minute patterns are also found. The vessel forms are still not clear, however, jar-like vessels with outturned rim are suggested in some instances. Accompanying finds were one shell ring, apparently a net-sinker and one clam shell with polished edge, obviously a shell knife. This find inventory represents the northern expansion of a cultural type found in the southern Ryūkyūs where however, it has persisted much longer than on the main island. It is a culture of a somewhat maritime orientation, plus superimposed rice cultivation with ancient techniques.

The lower layer is characterized by very thin pottery of almost blackish hue with sand tempering and a finish not yet found in these islands. The decoration consists either of irregular widely-spaced vertical stripes, made with a shell, or of horizontal ripples extending over the whole outer surface of the vessel. The inner surface is covered with finger impressions. The prominent vessel form appears to be an almost straight jar. Accompanying finds were one hammer-stone with indentations on upper and lower surfaces, one roughly shaped rectangular adze and one similarly finished broad axe (hoe?). Most remarkable amongst the find inventory were arrow-points made of shell.

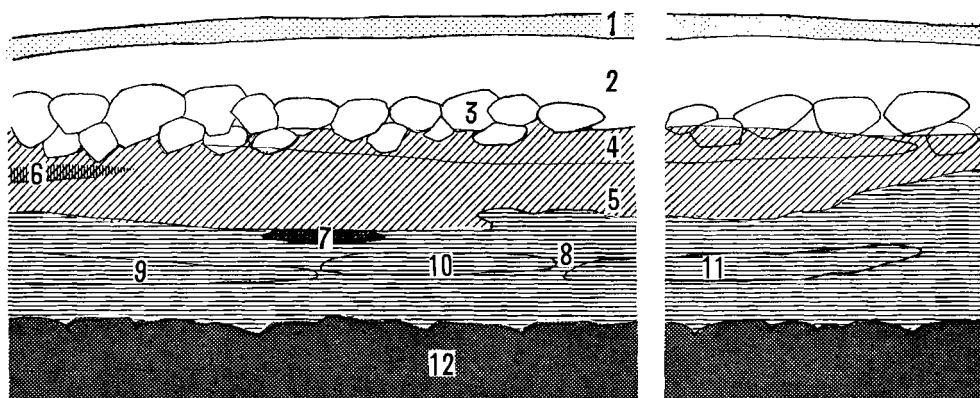


FIG. 13. Stratification of Yabuchi trial trench.

1. Artificial floor of efflorescent coral; 2. Culture containing layer of blackish earth (Haji and panari sherds); 3. Second artificial floor consisting of coral stones; 4-5. Earth layer of reddish-brown or dark-brown colour; 6. Whitish soil; 7. Ash; 8. Reddish brown soil layer. Thin pottery fragments; 9. Soil colour: blackish-brown; 10. Soil colour: brown; 11. Soil colour: blackish; 12. Coral mother rock.

Typologically types A (elongated triangle) and B (caulescent leaf-shape) are best represented (Fig. 11b). Some other specimens are obvious imitations of iron arrow-points. Some of the type B specimens were made of bone.

Type A arrow-points are found in wide distribution outside of Okinawa, but type B is mostly encountered in South China and in some prehistoric sites in the southern part of west Formosa. In Okinawa bone-made specimens of this type have been found in several shell-mounds. B type arrow-points made of stone were found in connection with the Shito dolmen site of North Kyūshū and in South Korea. They are, however, to date, unknown in South Kyūshū, Tanegashima, Yakushima and Amami Ōshima. This distribution seems to exclude a southward movement to Yabuchi and suggests South China as the dispersal area. It must be added that Okinawan prehistory was for a long time considered to have no arrow-points. Even now they are rare and either of bone, obsidian or chert.

It would be rash at this stage to try to fit the culture represented by the lower Yabuchi layer into the chronological framework of known Ryūkyūan cultures, or to determine its affiliations outside of the archipelago. However, this horizon is representative of a cultural type not yet encountered in these islands and broadens our conception of Ryūkyū prehistory.

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YAEYAMA

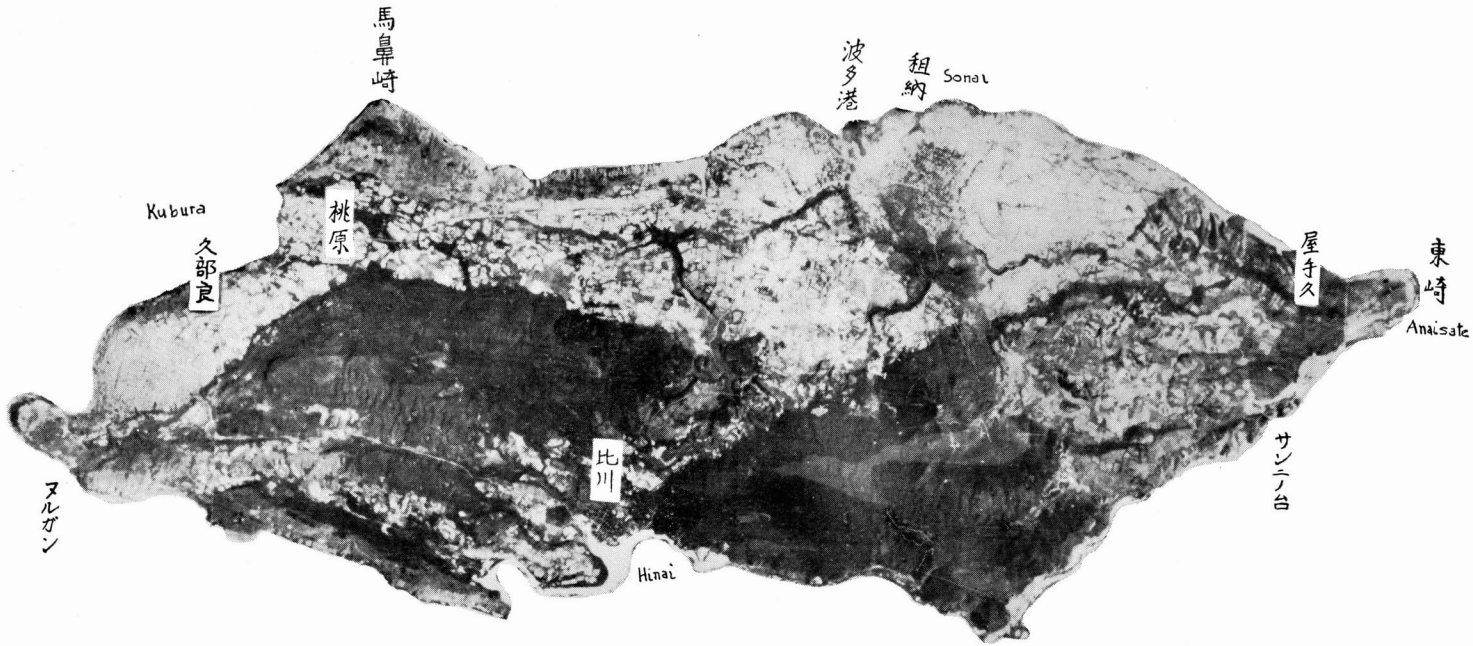
1960 Yaeyama, Tokyo.

YAEYAMA-TŌ YURAI KI

n.d.

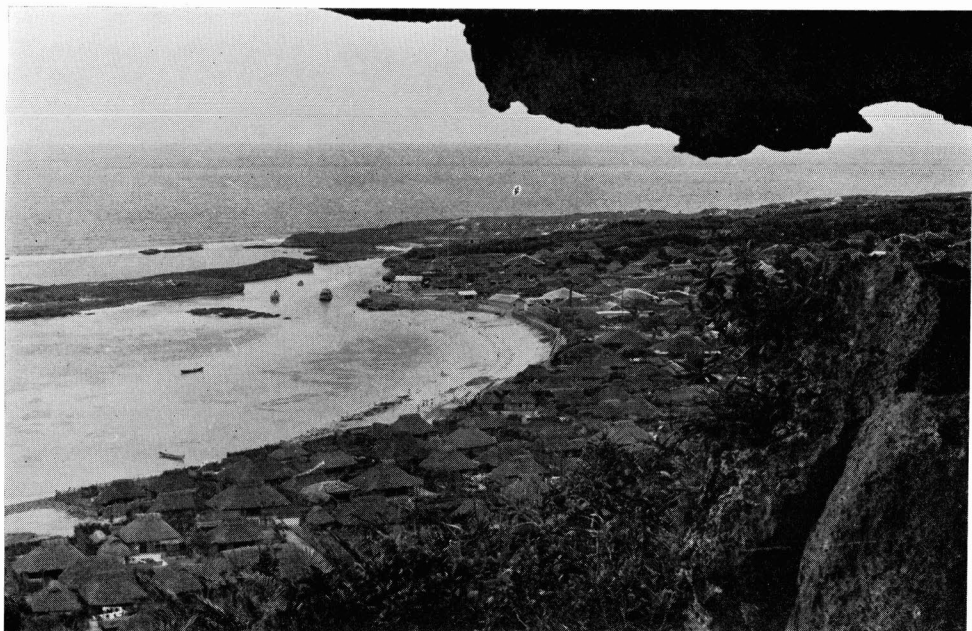
YAWATA ICHIRŌ

1949 *Nihon no Sekki*, Tōkyō.



Aerial view of Yonaguni.

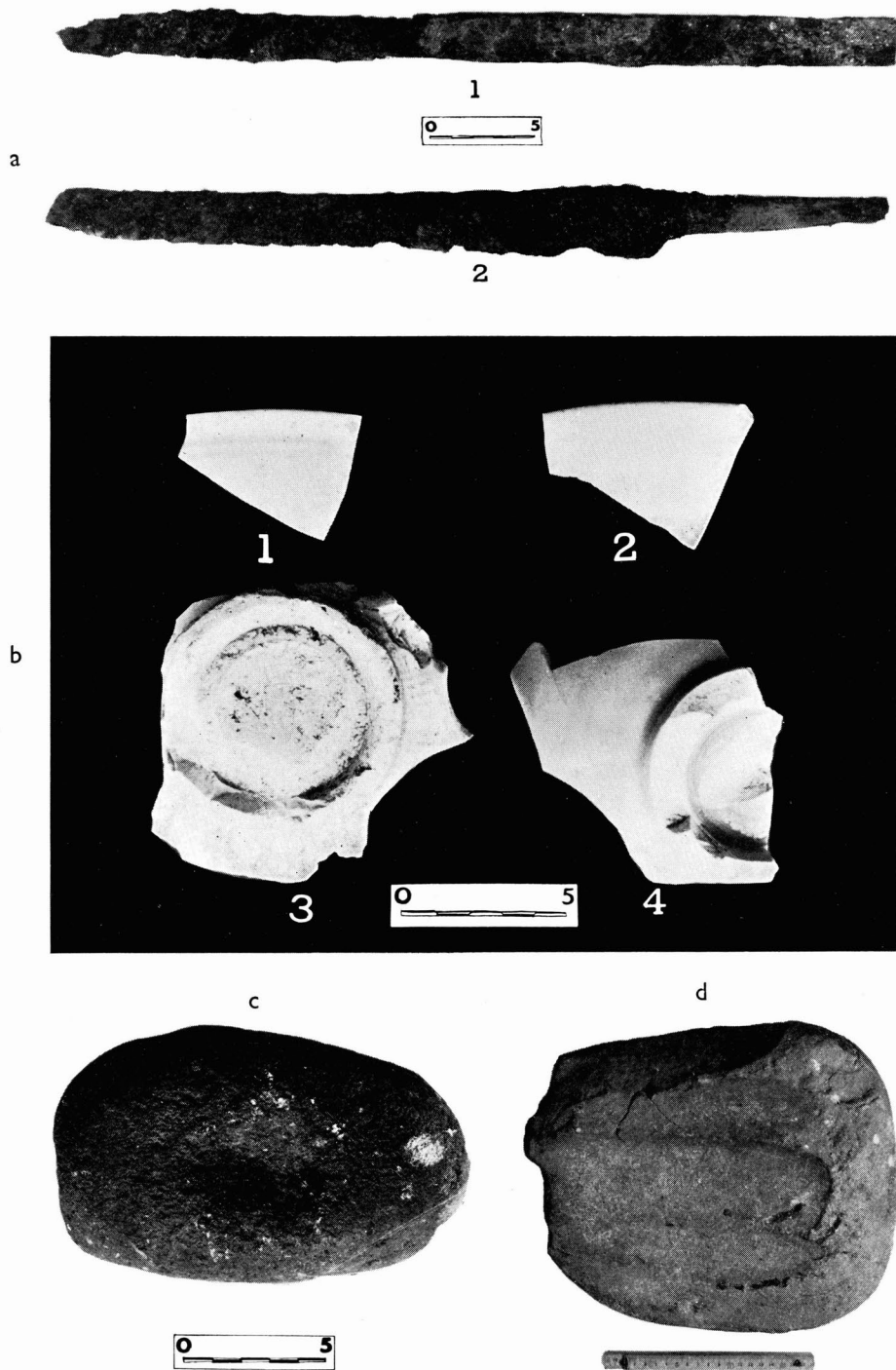
[After photograph in possession of Sonai Town.] Photo by courtesy of Professor Ogawa Tōru, Tokyo.



a. Sonai 租納. *See page 79, 83*



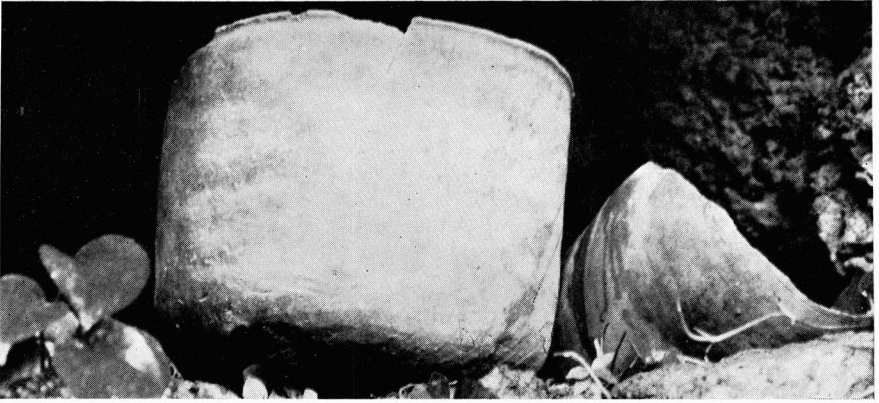
b. Maihama residence, Sonai Town. *See page 93*



a. Iron weapons from first layer of Kaneku trial trench. See page 87

b. Celadon sherds from Nakamadone trial trench.

c. Sonai indented stone. d. Grindstone in possession of Ishigaki Town Library.



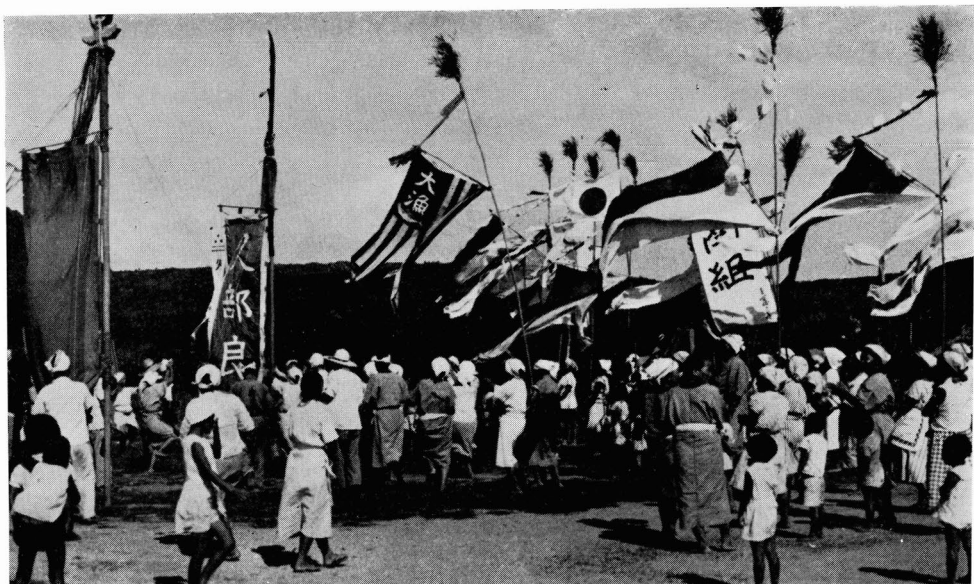
Tsuingata Bone-jars. *See page 90*



a. Reed-mace wall, Sonai Town. See page 93



b. Shira granary, Maihama residence, Sonai Town. See page 99

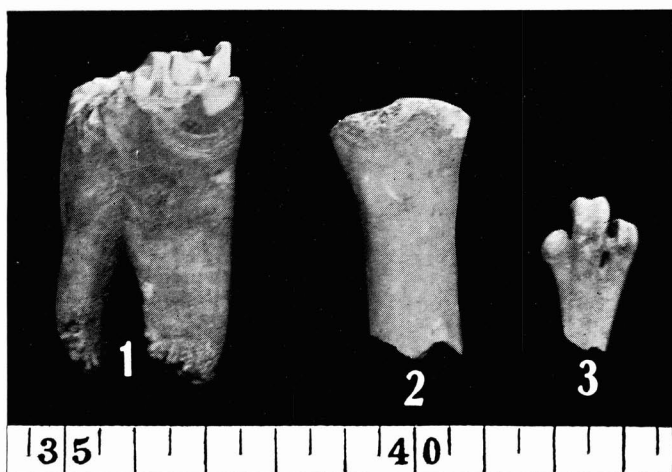


Unjami festival. *a.* Opening ceremony. *See page 107*

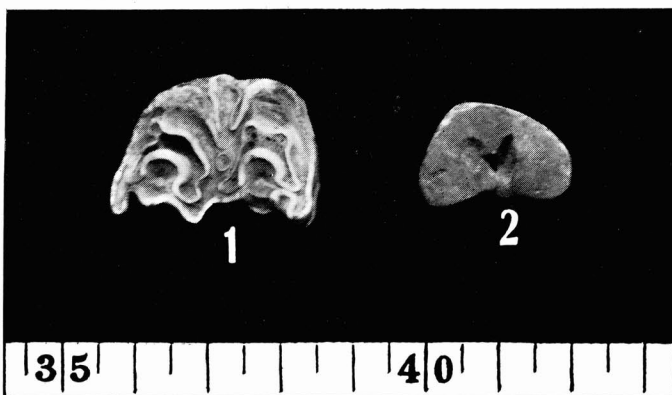


b. Women during the Race.

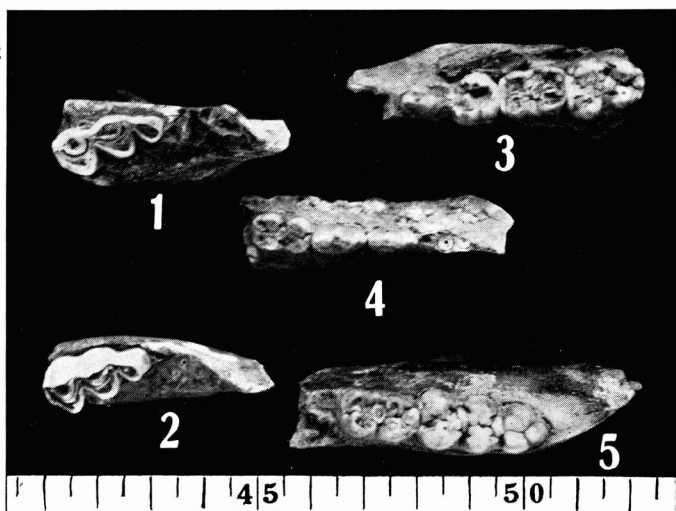
- a. Nakamadone Trial Trench.
1. Upper third molar of cow
 2. Pig tibia
 3. Tibia of domestic fowl



- b. Nakamadone Trial Trench.
1. Surface view of A 1 molar
 2. Right os metacarpale

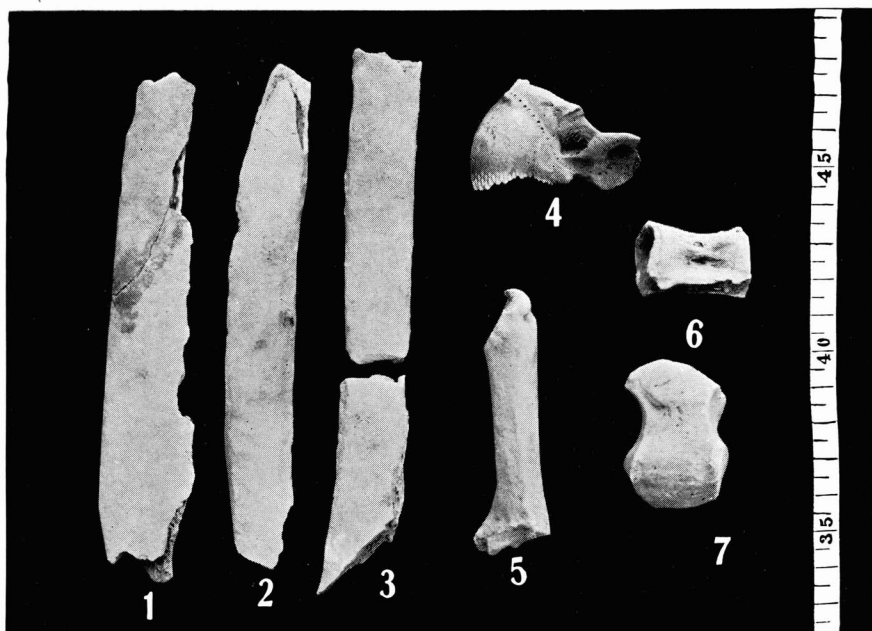


- c. Nakamadone and Yabuchi.
- 1, 2. Cow mandibula from Nakamadone
 - 3, 4, 5. Pig mandibula from lower layer of Yabuchi cave

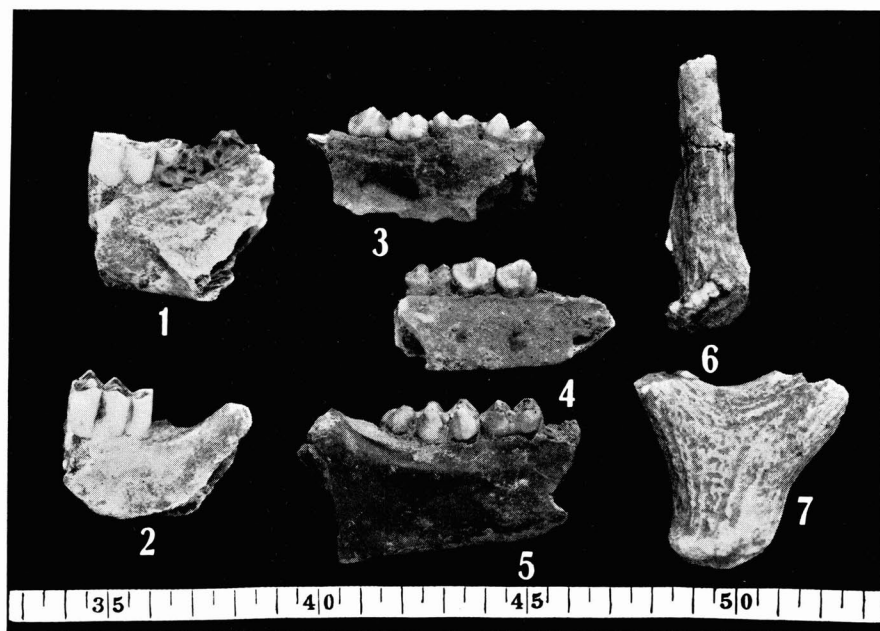


(Photos by courtesy of Professor T. Semba, Kyushu University)

d



e



(Photos by courtesy of Professor T. Semba, Kyushu University)

d. Nakamadone Trial Trench.

1,2,3,5. Cow ribs

4. Swellfish jaw

6. Pig os pedis

7. Pig talus.

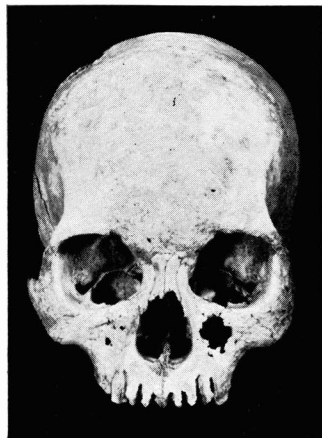
e. Nakamadone Yabuchi and Uji Cave.

1,2. Cow Mandibula (Nakamadone)

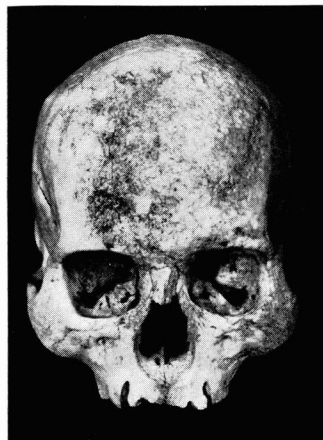
3,4,5. Pig mandibula (Yabuchi cave, lower layer)

6,7. Deer antlers from Uji.

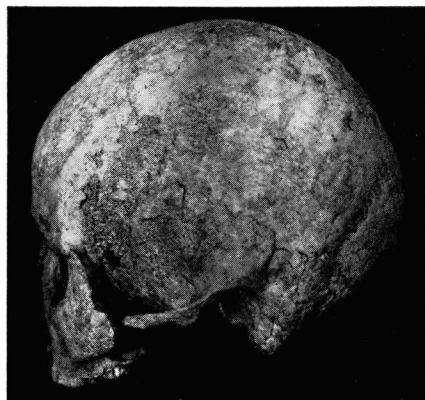
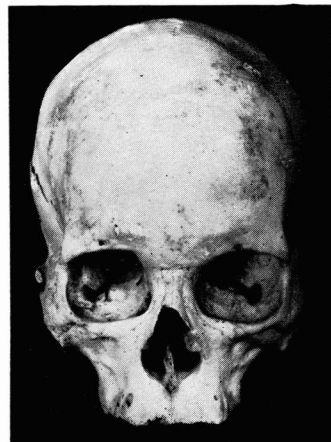
a



b



c



a. Cranium (No. 1), Hinai

Crania from Hinai and Akōbana

b. Cranium (No. 2), Hinai

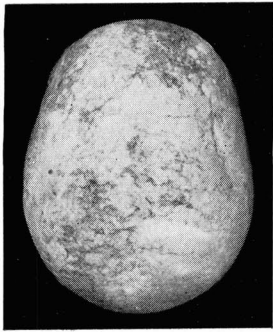
(Photos by courtesy of Professor T. Kanaseki)

c. Cranium (No. 1), Akōbana

1



4



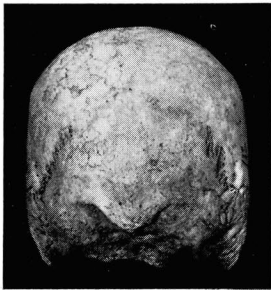
7



2



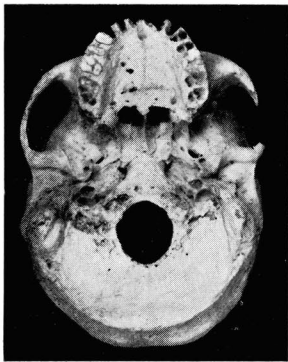
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8



3



6



9



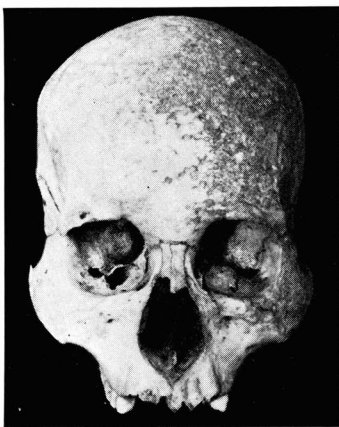
(Photos by courtesy of Prof. T. Kanaseki)

Cranium (No. 2), Hinai

Crania from Hinai and Akōbana
Cranium (No. 2), Hinai

Cranium (No. 2), Akōbana

1



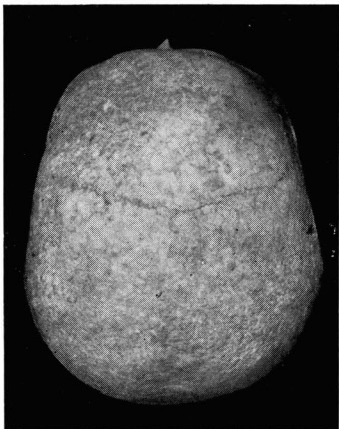
2



3



4



5



(Photos by courtesy of Prof. T. Kanaseki)

Cranium (No. 4), Sonai